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Theory of the Application of Stable or Yard Manure.

The letter of JOHN JOHNSTON of Geneva, recently quoted from the Genesee Farmer, (see Co. Gent. Vol. 8, p. 299,) has excited much interest, for it is of the utmost importance to know how to apply manure to the best advantage. Mr J. announces "that for the last twenty years he has acted in opposition to theorists in the application of barn-yard manure," and yet has obtained most satisfactory crops. So far as opposition to theorists is concerned, Mr. J. is very likely right; but it is certain that all remunerative practice must have a rational basis, and to signify this basis the word theory is legitimately employed. However Mr. J.'s practice is opposed to crude and imperfect theories, it cannot conflict with *the true and complete Theory*.

This true theory is the only key to a perfect practice; and to make our theories approach completeness is, then, a most desirabte object.

A characteristic of good theory is *breadth*. It is not derived from a narrow observation, and is not a hasty stroke of fancy; but comes from large knowledge and careful reflection. Every successful farmer like Mr. J., contributes by his operations and results, to the materials from which Theory is to be elaborated, and yet from no one farm, or kind of practice, can we learn in all their comprehensiveness, the great guiding truths of agriculture.

These remarks are suggested by the attitude so often assumed by agricultural writers with regard to Theory. "We are not among the theorists"—"without fear of being called a theorist," are examples that have occurred in comments on Mr. J.'s communication. It is a pity that so good a word as theory, which has the best reputation among the best philosophers, should be a scape-goat in agricultural literature. This will be mended as agriculture becomes more philosophical.

Thus much about Theory in general. Now for the Theory of the application of manures. Suppose we spread manure on the surface of grass land in the fall, and let it lie through the winter—what will happen? If the manure contains or yields ammonia by decomposition, doubtless some of this substance may escape into the atmosphere and be lost. But in "well rotted manure" the fermentative process has passed its period of activity; the carbonaceous matters of the straw and dung have become humus-like, and decompose slowly, and the ammonia they contain is probably in such a form that its escape by exposure must be very slow. Any ammonia that may be evolved passes into an atmosphere filled with the blades of grass, and without doubt is quite thoroughly economised by these living absorbers.

The soluble portions of the manure are washed into the soil, and if the latter contain only a few per cent of clay in its composition, there is little fear that any of these substances will be lost, or pass down below the reach of plants. The distance to which soluble matters may penetrate the soil under the action of rains, must depend on several circumstances, and principally on the retentiveness of the soil for soluble bodies, (the salts of the manure) and on the frequency and quantity of the rains. A pure sand has next to no retentive power; a pure clay has the greatest. Between these extremes there are numberless intermediate degrees of retentiveness. When a dilute solution of potash, ammonia and phosphoric acid, or what amounts to the same, putrid urine or sewage water, is filtered through a layer of soil, the first portion of water that passes through is quite free from these bodies; they have been, in fact, retained by the soil. If the solution is continuously poured on after a certain amount of pure water has passed, the soil becomes, so to speak, saturated with the solid matters, and they appear again in the water that flows through. If, now, the soil thus charged with potash, &c., is treated with a sufficient quantity of pure water, these bodies are generally washed out again, and may be completely (?) removed.

When a heavy rain falls on the ground, something quite similar takes place. The soluble surface matters, from manure or otherwise, are carried down into the soil, but are permanently retained within a certain distance from the surface, which distance is less as the quantity of rain is less, and the retentive power of the soil greater.

Now a very heavy rain wets down only a few inches, and accordingly we have very little reason to fear any considerable loss of soluble matters from the upper soil, if it be not too light in character, and if, being thorough drained or not naturally porous, the rains soak into it, and do not run off from the surface.

In the spring, then, we have our grass land that has been manured after Mr. Johnston's plan, ready to break up for corn; and if we compare its condition with sim-

ilar unmanured land, we find the former has a much heavier sod than the latter, as the effect of the fall manuring.* This sod is also charged with the soluble matters of the manure. If now we invert the sod by the plow, and put our seed-corn into it, it is obvious that the manure is just where it is wanted, viz., *distributed uniformly* through the upper stratum of the soil, and thus within reach of the roots of the *young* plant. Were the manure spread with a fork, i. e., in a very rough and imperfect manner, on the sod, and then immediately turned under to a depth of 5 or 6 inches, it could do the corn little good until its roots should strike down to that depth. Then they find the manure in one narrow layer, and may easily be injured by its rankness and strength. (?)

The superiority of the practice of planting on inverted sod, has long been fully recognized. The reason lies in the accumulation of plant-food at the surface of the soil, by the roots and leaves of the grass, and in the ready and regular delivery of these stores of food to the young plant by the decay of vegetable matter. It is highly probable that in the case under consideration, the soluble matters of the fall manuring, to a good degree, enter first into the grass, and then are by its decay yielded to the corn. The grass itself is made more susceptible to decomposition by the increased rankness of growth in autumn.

The practice of Mr. J. in applying manure (well rotted) to wheat just before it is sowed, and harrowing both in together, or top-dressing the field after the wheat is sown, is in accordance with good theory. The spring or fall rains to which the farmer looks to give the seed a start, and encouraging its early growth, in either case puts the manure just where the young plant needs it.

In the Co. Gent. of Dec. 11, Mr. MEEK, in his remarks on this subject, states that his experience and practice are the reverse of Mr. JOHNSTON'S. He recommends to plow under fresh manure just before planting corn. Mr. M., I infer, does not break up grass land for the corn-crop. Mr. M. says—"Let such manure, (good solid manure, full of rich juice and fresh,) be evenly spread and quickly plowed under, and I maintain, without any fear of being called a theorist, that it is a more economical way of applying manure than to let it lie so long on the top of the ground, 'wasting its sweetness on the desert air.'"

Probably Mr. J.'s plan of using "well-rotted" manure is best; very likely too, Mr. M.'s way of applying fresh "manure full of rich juice," is also best. Whatever issue there may arise between the two methods, resolves itself to the question—Is it better to use fresh or well-rotted manure? Some remarks on this subject may follow. S. W. J.

* I have recently learned from JOHN T. NORTON, Esq., of Farmington, Ct., that for many years he has practiced fall-manuring grass land with the most decided benefit, the effects of the application being speedily perceptible in the greener color of the grass; while spring manuring produces little increase of yield the first year.

Bodily and Mental Laziness.

A foreigner who had travelled through many countries, was asked what leading quality or characteristic he had observed most conspicuous and common to mankind everywhere. He answered in broken English, "Me tink dat all men *love lazy!*"

This disposition, which by indulgence, soon becomes a strong habit, is certainly very general, if not universal. It is not by any means confined to the habits of the body, but has a most especial control over the mind. *There are many men of very active bodies, who have very lazy minds.* We have employed many laborers who were quite willing to perform regular and severe work with their hands, who could *never be hired to think.* Mental laziness is more formidable than physical. We often meet with men who profess a great abhorrence of indolence, who, nevertheless, have very indolent habits of mind.

This mental laziness shows itself in a thousand ways in farming. Nothing impedes so much the progress of improved agriculture. Although men are willing to to "work" from dawn till dark, they cannot bear the mental application of reducing their work to a system. They cannot be induced to undergo the drudgery of mind required to plan all their work beforehand, and to execute every item with promptness and precision. They will not provide a place for everything, and see thateverything is kept in its place. As a consequence, many things are left out of order, and precious days are wasted in their search, at critical periods. Jobs are left unfinished, and in confusion. Operations, whose success depends wholly on a seasonable performance, are ruinously delayed.

There are, of course, many honorable exceptions—men whose farms show neatness, finish, and luxuriance in every part; whose work goes on with clock-work regularity; and whose well-kept implements, arranged like the alphabetical words of a dictionary, can always be turned to and found in a moment.

But even with *these*, there is often a large share of indolence on one point. It is in testing the accuracy of disputed or imperfectly established opinions, by well-planned, careful and measured experiments. An Indian was asked what kind of work he liked best. He answered, "Me like best to sit in the shade of tree, and see white man work!" Some very good farmers resemble him in wishing others to perform experiments for them, while they enjoy the benefit of the results.

A large number of instances have occurred within the past four years, of this unwillingness to take hold and decide important questions. The Shanghai controversy is an example. The agricultural papers were occupied with long disputes, which were the best breeds of fowls, and the advocates of the older Polands and Dorkings contended with the more numerous admirers of the Cochin Chinas and Brama Pootras; but neither seemed disposed to submit the question to the test of measuring the food and weighing its products. The same sort of controversy is now going on between the respective breeders of Devon and Durham cattle, with about the same prospect of a satisfactory solution. Other questions, such as early and late cutting of hay; the comparative value of grain and roots; the influence of succession or rotation on the amount of crops; the relative economy of high and close pastured grass; the exact acreable increase from the use of various manures, and many others, remain unsettled from the same cause. There is too universal a disposition to sit in the shade of the tree, like the Indian, and see others labor in these experiments—with the only difference that almost nobody labors in them; and guess-work is substituted for demonstration.

Every young farmer should begin life with *good habits.* Not merely good habits of physical industry, but with a constant use of his *thinking machine;* first, to establish a general system of perfect order throughout his premises, and then, by a proper combination of thought and personal activity, to determine practically, accurately, and reliably, every question of importance, having a direct bearing on any point of good management. A host of young farmers of this kind, would soon work a revolution in the practical agriculture of our country.

☞ In addition to the endowment of an Agricultural Professorship in the University of Virginia by $20,000 from Hon. Philip St. Geo. Cocke, of Powhatan, in that State, as recently mentioned in our columns, we see it announced that J. G. Bruce, of Halifax, has offered to bestow $10,000 in aid of the cause of agriculture, in establishing a model farm.

Cheap Paints for Fences and Buildings.

The many inquiries we receive on this subject, induce us to give the results of any experiments we make or which come under our observation. Having had occasion recently, to erect and paint a board fence about three hundred feet long, the following mode was adopted. The fence was made of six horizontal boards, besides the cap, nailed to red cedar posts, and to avoid expense, the boards (of nearly clear stuff pine) were left *unplaned*. The expense of planing both sides by a machine driven with steam, would have been about five dollars.

The paint applied was made like common oil paint, ground water-lime being used for the pigment, not on account of any virtue it may possess from its properties as a cement, but because of its *cheapness*, costing about half a cent a pound. It may possibly, however, be much better than some other paints, as a fence coated once with it in mixture with oil three years ago, appears as perfect as the day it was applied. In order to give it a warmer tint, to correspond with the buildings adjacent, a small portion of *Brandon Red* was added. A single coat of this paint was then given to the fence, the rough boards retaining enough to be equal to three ordinary coats on planed boards. About nine gallons of oil were thus consumed, costing about eleven dollars. The pigment was valued at fifty cents; and about four days were occupied in mixing and applying it, at six dollars cost, the whole surface on both sides and the posts being painted. The total cost was nearly eighteen dollars.

The expense of this application, as compared with using white lead paint, applied in two coats on a planed surface, is as follows: Two coats of white lead paint are estimated to cost fifteen cents per square yard. There were on both sides of this fence and on the edges of the boards, over 172 square yards, which at 15 cents each would amount to about $26. Consequently eight dollars was saved in painting, and five more, at least, in planing, if done in the cheapest manner, making thirteen dollars additional, which would make white lead nearly double the expense of the mode adopted.

A barn, thirty by forty feet, and with an average height of sides equal to eighteen feet, would present an entire surface of 275 square yards, to paint which, in the manner we have described, on new unplaned pine siding, would cost a little less than thirty dollars. A coat of whitewash may be applied for a less expense than five dollars. Two coats of white lead would cost forty-one dollars, besides the expense of planing.

There is no excuse for any farmer in not giving at least one coat of lime-wash occasionally to his outbuildings, if he cannot afford anything better.

A limited trial of the *Brandon paints*, manufactured at Brandon, Vt., by the Brandon Iron and Car-Wheel Company, gives a very favorable opinion of them. Experienced painters who have used these paints for us, pronounced the *Brandon Red* superior in character to Venetian Red, and Brandon Yellow as decidedly better than Yellow Ochre; while at the same time they are furnished at only two cents per pound.

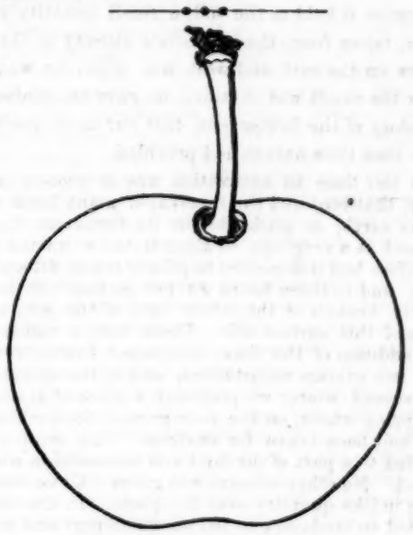
We have tried many experiments, and seen others try them, with those cheaper paints known as *washes*, of which a mixture of lime and water forms the basis. They are many times cheaper than oil paints, but still they are *washes*,—and more or less liable to be washed off or to scale off. White-wash of lime is, however, always valuable in its various modifications; and applied every two or three years to rough fence and rough out-buildings, serves a most valuable purpose in preserving the wood from decay and from moss, being worth many times their cost. But *oil paint* alone will endure unchanged and unaffected, all the changes of moisture and exposure.

Sugar Producing Plants.

Messrs. Editors—The query arises whether the "sugar beet" raised north of 40° north latitude, will furnish sugar enough to make it profitable? This question has been asked repeatedly, but from want of proper management, few if any have been willing to undertake the task, even for experiment. The extreme high price of sugar this year, resulting from the small crop south, and the enormous increase of consumers, has caused a great deprivation among the poor, of the article which of all others, they are reluctant to give up. Sugar and bread are the poor man's living two-thirds of the year. The only way for remedying this evil is to make our own sugar, and in such quantity as to reduce to a certain extent the price. The French have succeeded in using the "beet," and we might do so providing our farmers would undertake the experiment. Cornstalks furnish a large per centage of saccharine matters, (six per cent I believe, or about 300 lbs to the acre,) and the process is simple.

Perhaps a notice now and then in your paper would induce some one whose tastes incline that way, to make the experiment. It is my intention another year, to make a few experiments upon beets, carrots and cornstalks. A. C. Pope. *Binghamton, N. Y.*

Numerous experiments, to test the question whether sugar could profitably be made from beets and corn, stalks, were made in various parts of our country, about twenty years since, and although some good sugar was made from the beet, and tolerable syrup from corn-stalks, the conclusion very generally arrived at was unfavorable. Great hopes are now entertained that the newly introduced Chinese sugar cane will enable us to produce our own sugar. It thus far promises well, if we may rely on the published statements respecting it, and by the close of another season sufficient experiments will probably be made with it to test its value as a sugar-producing plant in this country.



The M'Laughlin Plum.

This variety has proved in Western New-York, of the very highest quality, and among all that are reputed to be equal to the Green Gage in quality, but all of which fall below it, this perhaps comes the nearest. It was stated by Samuel Walker of Boston, (and there is no higher authority among our fruit-growers,) before the American Pomological Society, that the McLaughlin has been less diseased with the black knot than any other variety.

Foster's Lime Brick.

We published in our last volume, (p. 93) a description of a new kind of brick or building material, invented by Mr. AMBROSE FOSTER. A correspondent afterwards inquired through our paper for Mr. Foster's address, and in answer to this inquiry we have received the following note from Mr. F.

75 NASSAU STREET, NEW-YORK, Dec. 16, 1856.

MESSRS. EDITORS—An inquiry from "*E. M. C.*," in a former number of your paper, has just been brought to my notice. As I have not the address of your querist I am compelled to certify to him my whereabouts through you. You have it above

Permit me to add that the reason why I have not brought my invention more prominently before the public, by advertisement, &c., is that I was desirous to *perfect*, as far as possible, the machinery and *modus operandi* of manufacture, before calling public attention to it. This I think I have now accomplished to a great extent, at least so far as to satisfy me of the ultimate utility of the invention.

Your correspondent's inquiry directed my attention to the article in the Co. Gent., which I had never seen before; though it is evident that its author must have been in possession of very correct information. I shall take the earliest opportunity to send you a specimen block. AMBROSE FOSTER.

Use of Lime on Lime-Stone Soils.

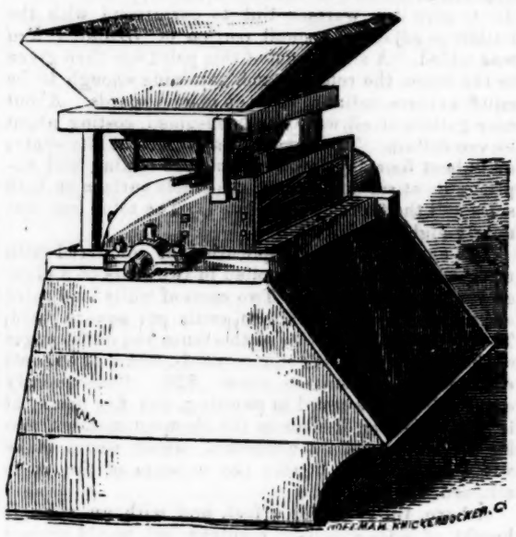
MESSRS. EDITORS—Some twenty years since a distingushed chemist in travelling through Western Massachusetts, on a voyage of investigation, favored us with a call, and among other things remarked that he thought our limestone lands sufficiently charged with lime to answer all agricultural purposes, without treating them to any additional quantity. To ascertain the proportion it held in the soil, a small quantity of the latter, taken from the immediate vicinity of the lime ledges on the east and west, was taken for analysis. After the result was obtained, he gave an opinion confirmatory of the former one, that our lands needed no more lime than nature had provided.

At this time an excavation was in process on the place, that required the removal of many loads dark, loamy earth, so muck-like in its formation that we deemed it a sacrilege to allow it to be wasted. We therefore had it deposited in piles of ten or fifteen loads each, and in these heaps we put perhaps one load of twenty bushels of the refuse lime of the kiln to ten loads of this surface soil. These heaps, which after the addition of the lime, composted themselves, lay over two winters undisturbed, and in the spring after the second winter we prepared a piece of stalk land for spring wheat, on the very ground from which the soil had been taken for analysis. This compost was applied to a part of the land and harrowed in with the wheat. No other manure was given. Grass seed was sown in like quantity over the piece. In the result it needed no landmark to tell on which part and how far this compost was given, neither in the wheat or succeeding grass crop. On the part where there was no compost given, the quantity of grass was uniformly one-third less than where it was spread. Wild wormwood crept into the uncomposted part, and it soon got over the benefit of fresh seeding, while the other portion of the field remained free from all weeds until it was plowed again. Here then we give an example of the benefit of lime on limestone land—the result of which was most clearly marked, for in all other circumstances the condition of the land was equal.

In doing this, however, we do not open a war on science in its application to agriculture. We are firm believers in the fact that farmers should be scientific men, and we fully believe that immense losses result every year for want of knowledge which science will impart. There was doubtless some cause why the result we have noticed was produced, but what the cause was, is beyond our power of explanation.

Science in its application to agriculture is yet in infancy; consequently it is imperfectly understood. General principles may be reached, but new and more minute facts will, in the course of progress develop themselves, and in due time the *why* of the result of our experiment may be seen.

While science is rendering such aid as in its present state, it can for the benefit of the the farmer, he in his turn should make such experiments as circumstances will permit, always being cautious to mark such causes as observation can discriminate, as well as their results, and thus be able to compare practice with theory, and find how far they will unite in his favor, and what causes lead them to a separation in their results. W. BACON. *Richmond, Mass.*



"The Excelsior Farm Mill."

This is a new and improved Portable Mill for grinding all kinds of feed, including corn in the ear. Many of them have been sold and used during the past year, and have been pronounced the best ever used by the persons using them. They are easily worked by a common two Horse Rail-way Horse Power, and will grind "five or six bushels of grain into fine feed or meal" in an hour easily. They are very durable, and are self-sharpening, and will grind at least 1,000 bushels of grain before new cylinders are required, which can be replaced at a very trifling expense. This mill weighs about 275 pounds and costs about $60 all complete. They are manufactured by RICH'D H. PEASE, of this city, at his Excelsior Agricultural Works.

A COLT FROM A MULE.—Mr. JOHN D. PITTS of San Marcos, Texas, writes the Spirit of the Times as follows:—"I have a mule that I raised, three years old in June last, that now has a colt by her side. Please say what I must call it. Its ears are not like the mule nor the horse. In other respects it resembles the mule. If any one disputes it, I have the mule and her colt in my lot; the doubting Thomases can see for themselves."

Ashes and Bone-Dust.

EDITORS OF COUNTRY GENTLEMEN—I would like to be informed through your columns, the true value (in cents) of leached and unleached ashes, per bushel, for manure for corn. How many bushels should be applied per acre, and how put on the land, and when? I want to know its least value per bushel, as a manure. Also the value of ground bones per bushel, and for what crops and when should the bone-dust be applied, and how? J. BONNER. *Hancock Co., Ga.*

We are sorry that the questions of our correspondent cannot be answered definitely. Both ashes and bone-dust vary greatly in their effects, often from causes which cannot be explained. Sometimes a moderate application will even double a crop—in a different locality, they frequently produce no sensible effect. We greatly need a series of accurate experiments with them in various districts. Their value will of course depend upon the results they will produce; and this must be determined by experiment. Where they have proved most successful, their value has been many times greater than an equal amount of good yard manure.

Leached ashes have lost most of their potash by the operation; but they still contain some, with much lime and other valuable ingredients. In some asheries, the leaching process is carried much closer than in others—often at least a third or a quarter remains behind, and sometimes even more. Fifty bushels of fresh ashes may be taken as a fair average application to an acre, varying, however, greatly with circumstances; and two hundred of leached ashes. A few hundred pounds per acre of bone-dust, if ground fine, are all that are usually applied. We should prefer applying the ashes broadcast for corn, as the roots soon spread and reach it, although more commonly applied with gypsum *in the hill*. Perhaps both ways together would be most efficient; yet as too much ashes on the young plants may injure them, caution is needed in the hill-dressing. Bone-dust is most commonly (and very safely) drilled in with the seed, especially of turnips, to which it is most commonly applied.

On the Use of Mowing Machines.

MESSRS. EDITORS—Can you advise me as to the kind of *mowing machine* best to be obtained for use, on a farm where *fifty acres* is required to be cut *annually*—where such implements can be obtained, and at what price? We have among us several enterprising gentlemen who have used implements for this purpose some, and *talked* about them more, but they are not mechanics, nor do they know *quite well* what they are talking about. I am myself one of these characters, but still I am desirous of better information; and know not where so likely to find it as at the fountain head of *Agricultural Science*, the office of the "COUNTRY GENTLEMAN." W *Mass.*

We have seen many mowing machines used, and have employed some of them on our own lands, and find them a most important labor-saving machine—nearly as much so as the plow and horse-rake. On large and tolerably smooth meadows, they will easily cut at the rate of half a dollar per acre; and if the grass is good, and the weather favorable, hay may be cut and raked into winrows with a revolver, for fifty cents a ton. This is the result of our own experience. Our correspondent may easily "figure up" from this data, and decide what to do with his fifty acres of meadow.

Without wishing to disparage any other machines, we have been most successful with *Ketchum's improved* machine, *Allen's*, and *Wood's Improvement of* Manny. The latter we have used most recently, and find it admirably adapted to rough or smooth ground, lodged grass, and other impediments, shearing its way through without clogging, cutting closely, and requiring a very moderate pace in the horses. If they move at an average rate of two miles an hour, (with no detentions) *Wood's* machine will cut precisely an acre an hour, requiring one man and two horses

We believe all are sold by the manufacturers for about $110; our correspondent will find Wood's advertisement in this journal of a few months past.

Management of Cattle Manures.

CATTLE MANURE is less inclined to a speedy fermentation, as it is while fresh of a more moist character, and generally when left, dries hard, which makes it unsuitable for use without it is frequently turned or composted with horse dung, which latter course is often pursued with advantage. A good practical farmer of twenty years experience, informs us that he always composts all the excrements of his horses, cattle, and swine together, which he thinks by far the most convenient as well as the best method, as the cattle and hog dung are rendered more soluble, and the horse manure is less liable to waste.

The use of cow dung is considered particularly advantageous on light soils, on account of its close and clammy nature, but on clay farms it is considered much less valuable without it is used in connection with other fertilizers; hence the great difference of opinion in regard to this manure; some deeming it very much superior to that of the horse, and others the contrary; it is, perhaps, more lasting in its effects than any of the other animal excrements, excepting that of swine, which is about on a par with it in this respect, but the durability must of course be somewhat governed by the food that the animal consumes.

The dung obtained from milch cows which are yielding a large quantity of milk, is found to be inferior to that from oxen, steers, and dry cows from which no milk is obtained, which proves that a considerable amount of the valuable portions of the manure is carried off in the supply of milk; it is also well known that the excrements from young growing animals are of much poorer quality than from those of matured growth, as a large amount of the valuable portions are used in the increasing formation of bone, flesh and muscle. We are informed on authority, that in some parts of England where the soil is naturally very poor, it has been found good economy to feed cattle on rich substances, such as oil cake, merely to increase the quantity and quality of the manure. This, we are told, is done even when the sale of the animal will not pay for the amount of oil cake consumed, leaving this deficiency to be made up by the increase of manure, which it amply does, so much so that a large moor in Lancashire, which was entirely uncultivated thirty years ago, has, by the practice of this system, become covered with profitable farms. Another fact well known to most practical farmers, but which has often been doubted by mere theorists, is that a ton of any kind of fodder or of grain can be fed out, and the returns in the excrements of the animal will be found to make more and far better manure than the produce before it has passed through the animal. This is well explained in one of the Lectures of Prof. J. F. W. Johnston, which were delivered before the N. Y. State Agricultural Society in 1849:

"Suppose an animal is fed on wheat, which contains a great quantity of starch, gluten, and mineral matter: when the animal undoes what the plant has done, that is, converts the starch into carbonic acid and water, by the action of the lungs, it separates the starch, which

in wheat forms more than half of its weight and all the other matter—the mineral matter and the gluten become changed into another form of matter, and what the animal rejects is richer in saline matter and in the material that contains nitrogen, than the food in its original state. It contains double the quantity of nitrogen. This is a very beautiful and interesting fact, showing that by the digestive organs of the animal you can obtain a manure richer than the vegetable and green food, if applied directly to the surface. Another point: the animal grinds down the food into a minute state with its teeth, and it is thus converted into a substance more available to fertilize the soil, than the dry straw or hay which it eats, if applied directly to the soil without mastication."

We have preferred to give the above in the remarks of Prof. J. to rendering the same opinion in our own words; for we look upon him as about the best authority at hand. It happens to strike us that many of our readers may say that in this brief treatise, so far, we have told them the plainest and most practical truths, many of which they have long known: for this we make no apology; we are endeavoring to supply something that is wanted by that large class of farmers who are constantly complaining (with truth) that agricultural papers have nothing *practical* in them that can be made use of on the farm. G. T. H.

Farming on the Prairies.

MESSRS. EDITORS—Thinking some of your numerous readers would be glad to know how farming pays in Illinois, as an investment for capital, I send you some account of the incomes received from the large farms in this vicinity, together with their mode of management, &c. I would premise my account by stating that there is a great difference in the quality of the prairie soil in the various sections of the State. Through much of the northern part the subsoil is sand and gravel, and the soil itself is so impregnated with sand as to make it too loose and light for winter wheat. Through Central Illinois, the soil is mostly a dark loam, on a clay subsoil, which you strike at a depth of from eighteen inches to four feet from the surface. On this soil wheat and clover grow most luxuriously, and it is unequalled by any land I ever saw for enduring drouth.

The country here, as in all the North-west, is divided by the government surveys, into sections of a mile square, containing 640 acres. These sections make favorite-sized farms with men who have the means to improve and carry them on; and the course usually pursued by those who have the *funds*, is to enclose such a farm with a three-board fence, and put on teams enough in May, June and July, to break it all up, and sow to wheat in September. This crop frequently pays for the land, the cost of fencing and of putting in and harvesting the crop; and if well done may be *safely* counted on for from 15 to 25 bushels the acre, and at only 15 bushels to the acre, at $1 per bushel, you have the snug income of $9,600 with which to cover the first year's expenses.

This crop being off the ground, the owner is prepared to commence farming on a scale that would be called pretty extensive in New-York. One of the first things to be done is to provide himself with a large amount of stock, either sheep or young cattle, to eat up the straw and corn fodder raised upon the farm, and he need be limited in the number he buys only by the amount of funds to buy with, as prairie pasture and prairie hay is too abundant here yet for any one to be in danger of being overstocked. This stock is herded on the prairie through the summer season, at no expense to the owner except to keep a herdsman; and in winter on the coarse fodder of the farm, except such as are intended for beef, which are kept entirely on shocked corn, stalks and corn being fed together. Hogs are kept to follow the cattle and gather the waste, so that, although it may seem a wasteful way of feeding, there is not as much lost after all as would pay for the labor of husking, grinding, &c.

The crops on such a farm the second season, are usually perhaps 160 acres of corn, two or three hundred acres of spring and winter wheat, and the balance in barley, oats, potatoes, &c. As much land as is required for meadow and pasture, is seeded down on this crop, and the rest is cultivated year after year, "ad infinitum," for they pay but little attention to the rotation of crops here yet. There are fields in my neighborhood, that have had corn on them 21 years in succession, and the crop is better on them this year than on new land. The corn crop averages from 50 to 75 bushels per acre, being plowed through three times and never touched with a hoe, and is mostly fed up on the place, as it pays much better than to sell at ordinary prices.

The land is so easily worked that six men can perform the labor of such a farm through the summer season, except in harvest, threshing, &c.

Now for the amount of sales from such a farm as this, and you can judge whether Illinois farming pays. A good farmer when once a-going, would sell (I make my estimates from what they are doing all about me,)

One hundred head of beef cattle, say at $36, ...	$3,600
One hundred and fifty fat hogs at $10, ...	1,500
Five thousand bushels of wheat at $1 per bushel,...	5,000
One thousand do. barley at $1 " ...	1,000
	$11,100

This is a low estimate of what can be done every year on that amount of land. It is no more than any man can do who comes to this country with an ordinary amount of energy and a capital of $10,000, provided he buys his land partially on credit, for lands both wild and cultivated, have advanced so rapidly in price of late, as to require some money to buy them. Wild lands within twenty miles of Bloomington, are selling for from $12 to $20 per acre, and improved farms from $25 to $50 and $60, according to location, buildings, &c., and are not very dear at that, as they are worth at least as much for farming purposes as any Eastern land that sells from $70 to $100 per acre. It is not to be wondered at, as such facts as these become known, that Eastern farmers who have their means invested in land on which they have to be industriouss and saving to make it pay the interest, should sell as soon as possible and try their fortunes at the West. There are no better customers than here for blooded stock and all the improvements in farm machinery, and with the capital to develop the resources by which they are surrounded, there is nothing to prevent the Illinois farmers from taking the first rank among the agriculturists of the country. S. W. SUTHERLAND. *Near Bloomington, Dec.* 4, 1856.

Underdraining with Stone.

EDS. COUNTRY GENT.—As information has been solicited in relation to underdraining with stone, I will give some practical results in relation thereto.

In 1836, I commenced reading your own Genesee Farmer; and from that was induced to commence the work of blind draining.

In 1839 or '40, I had some 200 rods laid down, two feet deep, and filled by throwing in cobble stone, promiscuously. They worked tolerably well for a few years, but have failed, and are of but little use at present. Other ditches have taken their place.

I have since, at different times, laid from eight to nine hundred rods in the following manner:—The lar-

ger drains 2½ feet deep and 1½ wide—the branches 2 feet deep and 14 inches wide, and square at the bottom.

They are filled by placing cobble or other stone broken with a hammer at each side of the ditch, in a manner so that they cannot be shoved inward by the pressure of the stone above.

Cover the large drain with flat stone, that are not more than six to ten inches wide; if they are wider, they must be broken and placed on so as to press on all the side stone, to keep them in their place. If the capstone do not reach across the ditch, place stone at the ends, to prevent shoving either way. The capstone for the small ditches, may be the cobble or any other stone, not too wide or thick. The throat of the ditches to be in the larger, six, and in the smaller, three to four inches square. Fill up with any kind of small stone, carefully covering all the cracks, and level, leaving one foot of earth above. Put on a little straw or inverted sods; plow in the dirt with a team, and the work is done.

My ditches, built as above some twelve to fourteen years ago, continue to work well, where there is sufficient fall, and where they have not been obstructed by muskrats and other vermin.

The cost, for digging and stoning, in this locality, is from eighteen to twenty-five cents. R. J. B. *Clifton Spa, N. Y.*

Culture of the Cranberry.

Answer to Inquiry of Wm. Marks—1st. Your land is right, and you may prepare it for cranberry vines two ways—1st. remove all the surface sod this fall and winter, and set your vines in the spring. It is important to have the muck frozen to prevent its drying, cracking and rolling up in the hot weather, which would kill the vines the first season if not frozen.

Second way. Cover the surface with sand, say 2 or 3 inches deep, after having removed the bogs; then set your vines in the spring from April until June. The sand helps to keep the weeds down, and adds to the bearing qualities of the vines by slightly dwarfing them.

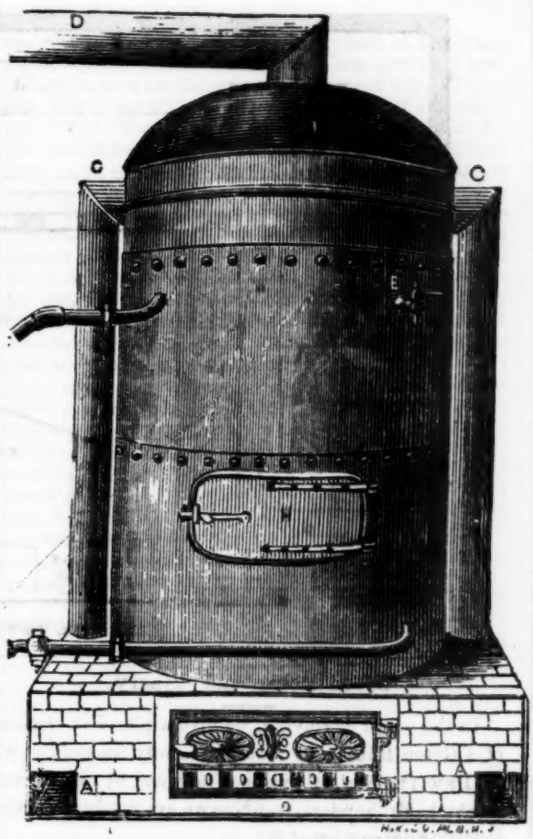
There is as much difference in vines as there is in apple trees, some loading heavily with large berries, while others bear none at all. I answer from six years' close observation, coupled with experiments, and say that barren vines will not bear fruit if cultivated ever so well. Different kinds of vines should not be mixed when set, as the time of ripening varies in the twenty kinds I have got, from one to two weeks.

They will, if well set, give two quarts of berries to the square rod, the first year.

Set in hills, 3 plants to a hill, 20 inches each way, or nearer if you have vines plenty. I draw a line and punch the holes for the vines with a stake fitted for the purpose, into which I put the vines, and cover two-thirds with earth. After you have clean vines of your own, you can set in hills by cutting sods of cranberry vines, and placing them where wanted; but wild vines, if set in this way, can never be separated from foul weeds which usually accompany the roots of the cranberry sods.

I think the Bell variety safest to commence with; the Cherry requires durable water all the year. Favorite is the most prolific bearer which I have in cultivation; it mats quick, with large excellent flavored berries; never rots with me, but is rather dwarfish, not growing over 5 or 6 inches high, while the Bell variety reaches 10 to 12 inches in height. The cranberry plants are hardy, and grow readily from slips or cuttings without roots, and any one choosing to cultivate them will find it a pleasant and profitable branch of farming.

I drew the two first prizes of $3 each at the Cayuga County Annual Fair, for the best cultivated cranberries. Daniel L. Halsey. *Victory, N. Y.*



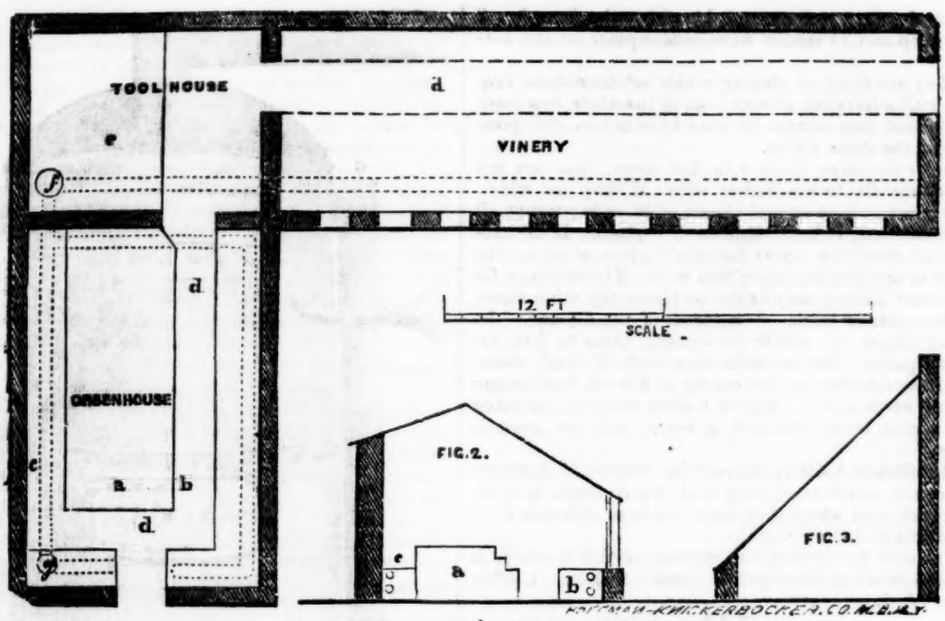
Savage's Boiler for Warming Houses, &c.

The above cut represents a Boiler recently invented by S. T. Savage of this city, and adapted for mechanical purposes of any kind, for heating buildings, greenhouses, &c., and for use wherever hot water is desired in large quantities. The principle on which its presumed superiority depends, is that of causing a perfect combustion of fuel and gases, by so introducing the atmosphere to the action of the flame, that its oxygen shall combine with the large amount of combustible products that would otherwise pass off from the coal unconsumed, and by effecting the entire burning of the whole, save a very considerable percentage and require less feeding and attention than boilers of other kinds.

Remedy for the Bark Louse.

Messrs. Tucker—Your Nova-Scotia correspondent will find a certain remedy for the bark louse, in using the common sal. soda, which may be had at any druggists for about three cents per lb. Dissolve it in water, allowing one lb. of the sal. soda to each gallon of water. When well dissolved, apply it with an old white-wash brush to the limbs and trunk of the tree. It destroys all insects which harbor under the loose bark, and effectually kills the bark louse. I use it in spring and autumn when the trees are not in leaf, and its effects are astonishing in giving a new vitality to the tree.

Can any of your readers in return, tell me anything of the effect produced by applying old iron to the ro ts of fruit trees, and whether it must be placed in contact with the root? T. A. Craven. *Franklin, N. J.*



MR. DEWITT'S GREEN-HOUSE.

Green-House and Vinery.

In the above engraving, we give a plan and sections of a Green-House and Vinery, recently erected by W. H. DEWITT, Esq., of this city, designed by our correspondent, Mr. Sanders, to whom we are indebted for the following description of it:

The houses are on a small scale, but compact and nicely adapted to grounds similar to those they occupy, and the requirements of city residents whose tastes lead them to look to this as a means of recreation after business. The ground on the back of both houses is in other hands, there being a jog of 33 feet commencing with the outer end of green-house.

The dwelling in this instance is westward, overlooking the back wall of the green-house, which is softened by its being low and the short roof of glass sparkling in the sun. The green-house has nearly or quite a due east aspect, which, with the three-quarter span roof and glass end facing south, answers well enough, while the vinery has an admirable aspect, (south) with a very warm border, made with the utmost care in every respect.

In front of the green-house, and to the dwelling-house westward, continuing to a line with the end of vinery, is the flower garden and grass plot. Below the vinery a small kitchen garden, in which is a neat little peach and fig house, somewhat smaller than the vinery, nearly completed.

The engraver has placed the tank in the corner, it should have been close to the door. In the vinery also, the height of back wall should be 13½ feet instead of 12 as shown—otherwise the scale will give the dimensions.

EXPLANATION.—*a*. Back staging, made of open wood work, and painted invisible green.—*b*. Front stage, with close boards, covered with sand, having a small space left next the front wall, for the heated air from the hot water pipes to pass directly up to cut off cold from outside.—*c*. is a slat walk two feet above the floor line, the same in height, for convenience of watering and examining plants. This walk obstructs no room, as the back plants are generally tall enough to project over it, and be sufficiently out of the way of the head. *d d*. are walks also of slats, laid on a brick floor, the former recommended from their being drier and pleasanter to walk on in winter. *e*. is an excavation in tool-house, five feet deep, to receive the boiler, *f*., and to hold coal sufficient for a supply through winter; it is floored over with boards; this room has a tin roof.—*g*. is a tank for feeding the boiler with water, and to allow for expansion. The apparatus is one of Hitching's, of New-York, and works admirably, and will consume but little coal. There are stop-cocks to shut off the water from either house. EDGAR SANDERS.

Alum in Candle-Making.

MESSRS. EDS.—In your last number you inquire for information as to the process of hardening soft tallow by the use of alum. We have taken interest to inquire of one who has long practice in the operation, and learn as follows: The proportion used is about one pound of alum to eighteen of tallow. If the tallow is very hard, a less quantity is used; if soft tallow, the quantity of alum may be greater. The mode of operation is, to put the alum in water which is raised to boiling heat, by doing which the alum is thoroughly dissolved. In dipping the candles, this water in a boiling state is added to the tallow as the quantity is diminished by the growth of the candle. This fairly mixes the alum with the tallow, while the water settles in the vessel under the tallow We have seen very fine candles made from old lard with a portion of tallow by this operation.

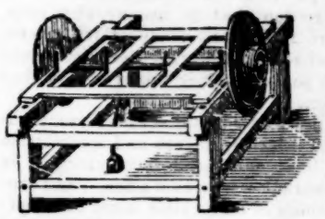
We have spoken, as is seen, of the manufacture of dipped candles. The water could not well be used in making mould candles, but the proportion of alum and tallow would probably be about the same as in the former case, and the mixture can be effected, for aught we can see, by putting the alum into the tallow when cold, and dissolving them together. W. B. *Richmond, Mass.*

A PRACTICAL COMPLIMENT.—Our readers will remember our quoting a week or two ago, a very complimentary note from a correspondent at Whitehall. We must now acknowledge our indebtedness to him for a list of nearly *Fifty New Subscribers* to the Co. GENT., all at that post-office—for which as well as for his good opinion, we are very much obliged. This is a *practical* way of expressing approval, which can but commend itself to the imitation of every reader.

Sawing Wood by Horse Power.

MESSRS. EDITORS--Please inform me what machine is best adapted for sawing up wood at the door for fuel —where it can be obtained, and at what price. S. B. S. *New Paltz.*

The annexed engraving exhibits a circular saw-mill



generally in use for cutting wood for railroads, farms, &c, and found of great service in splitting fencing, for carpenter's uses, &c., &c. They are equally well adapted for one or two horses, and are capable of cutting twice through, with two horses and four men, from 20 to 30 cords of hard four feet wood per day, or half that amount with three men and one horse, requiring no change of team. The saw is generally used from 24 to 26 inches diameter. They can be procured at the different Agricultural warehouses in this city. The one represented above is made by EMERY BROTHERS—price $37.

The Best Cattle for Slaughtering.

The rearing of cattle for the beef-market will certainly call into requisition a larger amount of scientific and experimental knowledge, when the consumers and venders of beef shall have made the discovery, more generally than at present, that the beef of certain breeds, and still more, of certain modes of feeding, is greatly superior to that otherwise produced. When a proper distinction of this shall be more generally made, there will be a call for superiorly fed animals, which will attract more attention and greater numbers to that department of agricultural skill and labor.

To those who are at present engaged in the raising of cattle for the market, or in the production of the best quality of beef, it may be both interesting and instructive to be informed as to the principles and practices of those who have been the longest employed in this department of business, and who have brought to its pursuit all the resources or helps to be found in physiology, chemistry, the analysis of food, &c., together with the facts accumulated during a long experience. That the business of rearing and feeding of animals for the production of beef and other kinds of meat has been pursued during a longer series of years, and has received much more attention in Great Britain, than it has, as yet, in this country, will be at once acknowledged and admitted. From the best experience of those in *that* country, who are the most successful in this department of business, there are few in *this* country, we presume, but might gather many useful hints and items of information. We have, accordingly, been induced to select a few such hints and items from recently published essays and discussions, giving the results of the experience of those who have been most skillful and most successful, in the business referred to, on the other side of the Atlantic.

To obtain stock best fitted for feeding, or for the laying on of fat and flesh and early maturity, breeding by crossing distinct or allied breeds is much resorted to among British feeders. It is a fact, pretty generally known we presume, that a vigorous progeny is usually obtained as the result of a cross of two distinct breeds. This fact or law is the foundation and explanation of the practice just named. Another result of the crossing of breeds is, that the offspring are generally precocious, with a tendency to an increase of size. To secure this result with the greatest degree of certainty, and to the utmost extent, it is the usual practice to select a male having the peculiar properties of early maturity, and the disposition to accumulate flesh and fat rapidly. Size is also a quality which is regarded; but ought to be, always, deemed of less importance than a hereditary tendency to obesity, precocity, and superior quality of flesh. As the Shorthorns possess these qualities in an eminent degree, this breed is almost invariably resorted to for a male for crossing females of other breeds. Where the rearing of cattle is followed mainly with the view of obtaining stock for the production of beef, the practice in many districts is to use a pure bred male of the Short-horn breed, with a female of the breed peculiar to or prevalent in the particular district. This system of crossing is gradually extending over the whole of Great Britain and Ireland. This class of cattle is rapidly extending in most of the northern counties of England, where the breeding of cattle is practiced to any great extent. The dairies in London, also, are mostly supplied with cows so bred.

In both of these respects we might follow the practice of our British brethren, with good prospect of similar results. For here, as there, the Short-horn breed is peculiarly characterised by a tendency to early maturity and to a great accumulation of fat. This breed is also possessed of valuable qualities as dairy stock, though their lactative capacities have not been cultivated so much as their capacity for laying on fat and flesh.

Winter Pruning.

MESSRS. EDITORS—Will trimming fruit trees during the winter time, injure them in any way? I have a large orchard which I want to trim this winter. Would the place where the limb was sawed off dry up and rot, or heal over in the spring? Which is the best time to trim? E. DENNISON. *Forestville, N. Y.*

Trimming orchards in winter has been long practiced by some good orchadists with success. The sap not moving at this time, the wood when cut becomes dry at the surface in a short time, ready to receive a coat of protecting cement. This coat may be applied soon after cutting, or the following spring. A hot mixture of tar and brick dust, or tar and pounded dry clay, answers a good purpose; but a thick solution of shellac in alcohol is more neatly applied and is generally preferred, although more expensive. Some good orchardists prefer midsummer to winter, and it is probably the best time, all things considered.

The Concord Grape.

MESSRS. EDITORS—I saw in the Country Gentleman a notice of the Concord and Isabella grapes, in regard to their time of ripening. As there appears to be so much difference in different localities, I thought I would give you the result of mine. I have endeavored to give them a fair trial. My Concord and Isabella are standing 10 feet apart; they have the same cultivation and exposure. The Isabella is six years old and the Concord four. They both gave good crops the past season. The Concord gave fourteen pounds, and was ten days earlier than the Isabella. Some of the bunches were nearly equal to the outlines in the Country Gentleman. The Concord promises well, being perfectly hardy and a good bearer. It will without doubt be the grape to cultivate as far north as Oswego. S. WORDEN. *Minetto, Oswego Co.*

How to Grow Good Potatoes.

MESSRS. EDITORS—Much has been written and published for a number of years past, on the subject of the "potato rot:" and also the different modes of cultivating, the different articles applied to, and the general treatment of the crop, for the purpose of preventing the recurrence of the disease, and to obtain sound and healthy potatoes. After experimenting a number of years with the crop, I have come to the conclusion that *fermentation* in the soil, whether caused by the decomposition of vegetable matter, or by the application of unfermented manures to the land, has a tendency to make the potato rot; consequently as a general rule, I have discarded the use of green manures for that crop, and directed my efforts to raising the best quality, rather than the greatest quanity of potatoes.

The method of cultivating the potato crop which I have adopted, and which, with slight variations, has been extensively and successfully practiced by the farmers in this vicinity, is this:

In the spring I select a piece of sward ground suitable for tillage, and plow at least six inches deep, being careful to lay the furrows as flat as possible; then sow the land with oats or buckwheat. I consider buckwheat the best crop, as by shading the land it more effectually prevents the growth of grass and weeds, and the sward becomes thoroughly decomposed, which is quite an object in the cultivation of the succeeding crop. In the fall after the crop is harvested, about 40 loads (30 bush to the load) to the acre of well rotted manure, is spread on the land and plowed in. The manure is principally made by composting muck with the manure made by the farm stock.

The next spring the land is plowed again, thoroughly harrowed, and then marked out with a horse and light plow; the rows running north and south; the rows three feet apart, and the hills eighteen inches in the rows. The seed is dropped, one potato in a place, and covered with a hoe by hand—the crop is generally hoed twice. The time of planting varies from the first of May to the first of June, depending on the forwardness of the season, and the condition of the land for working.

By this manner of treating the land, it will be readily seen that fermentation, caused by the decay of vegetable matter in the soil, has nearly or quite ceased, the turf has become thoroughly rotted and pulverized, and the manure is well incorporated with the soil, and in a condition to be at once appropriated to the immediate wants of the potato crop.

Another item of considerable importance to the farmer in this part of the country, is this: If the manure is drawn and spread, and the land plowed in the fall, it saves so much time in the spring when work of all kinds drives hard, and many times it is impossible to get in the different crops in suitable season. Again, in the fall the land is generally dry, and carting or travelling over it does not injure it for the next year's crop—but in the spring, the land if not wet, is comparatively soft, and repeatedly going over it will cut and parch it up, or pack it down, which in either case materially injures the land for the season.

The crops of potatoes which I have raised by the mode of cultivation described, have yielded from 150 to 350 bushels per acre, and with the exception of two years, the loss by the rot has not been over two bushels in a hundred in a year.

The soil in this vicinity is similar to a large part of the land laying on the eastern slope of the Green mountains in this latitude, which every one acquainted with knows to be a cold, wet and shallow soil, underlaid with a subsoil of *rock* generally, but in other places with gravel and hardpan—the composition of the soil will be easily understood by the timber growing on it, which is composed of maple, birch, beech, spruce, hemlock and fir, and also the rock found on and in it, which is principally granite with occasional tracts of lime rock—the water in the streams and wells being soft, except where the lime rock predominates.

I have been thus particular in describing the nature of the soil, for the reason that in raising any crop, different soils require a different mode of treatment, and the same kind of soils in different localities would produce as well and perhaps better under some other method of cultivation.

I think that it must be plainly seen by every observing Agriculturist, that the nature and composition of soils which have been cultivated, have changed in a measure from what they were years since,—and consequently other methods of cultivation must be adopted than those formerly used, in order to obtain good crops and make farming a remunerating business.

It seems to me to be incumbent on those who are engaged in tilling the soil, not only to endeavor by careful experiments, to ascertain the best methods by which this want can be supplied, but through the medium of the Agricultural press, diffuse that information among those engaged in raising food for the wants of mankind. C. T. ALVORD. *Wilmington, Vt.*

Protecting Dried Fruits.

An inquiry was made in the Cultivator, by W. C. HEALY, how to keep dried fruits for summer use. A number of modes have been published, by different correspondents, to protect them from worms. Some of these I have but little faith in; for instance, the idea of steaming dried fruit over boiling water, and then putting it immediately into bags without drying; the effect of this, I should think, would be to mould and spoil the fruit. The washing of the fruit as suggested by another correspondent, I think a useless labor. It is trouble enough to dry them once. A FARMER'S WIFE recommends the scalding of them in a hot oven; if she means baking them, I think her plan the best of any suggested. If fruit is put into good linen or cotton bags, and tied up tightly immediately after drying, and baked a couple of times during the season, by putting the bags on a board in the oven moderately warm, keeping them in a dark closet in the meantime, the worms will not disturb them. Another excellent way to protect them from worms, is to procure empty liquor barrels and pack them in, after drying in the fall, and cover them up tight, or put them in other barrels, and add a little whiskey or brandy as you fill them up. J. W. L. *Kingwood, N. J.*

PRINCIPLES OF CHEMISTRY; Embracing the most recent Discoveries in the Science, and the Outlines of its Application to Agriculture and the Arts. Illustrated by numerous Experiments, newly adapted to the simplest Apparatus. By JOHN A. PORTER, M. D., Prof. of Agricultural and Organic Chemistry in Yale College.

This work, intended as a text book for the young student, possesses the advantage of being written in a clear and concise style, freed from the use of all unnecessary technicalities and symbols. It is thus made interesting to the general reader unacquainted with the subject, as well as less difficult and tedious to the scholar. But the main feature with which we are here concerned is its treatment of the application of this Science to Agriculture, to which an excellent introduction is given in ten or a dozen pages, marked by very correct views of the connection and reasonable anticipations of its results. The chapter on Animal Chemistry deserves equal commendation. While teachers may profitably examine this work with a view to its introduction as a text book, every young farmer who has not already "studied up" on chemistry, would be benefitted by its careful perusal.

The Spanish Fowl.

It is not now known from what progenitors the Spanish fowl has descended. But the countries bordering on the Mediterranean, with its numerous islands, abound with domestic fowls that bear so close a resemblance to the Spanish, that they unquestionably descended from the same original stock.

The name Spanish is evidently a *misnomer*, for the bird so named is not an aboriginal of Spain, as the name would seem to imply; but it was probably early imported into that country from the eastern borders of the Mediterranean, and soon becoming naturalised in Spain, it was carried from there into other European countries. Spain has few, if any, first rate specimens at the present time, as the race has degenerated by crossing with the original domestic fowl of the country, of a gray color, called the *Manx*.

The English have formerly obtained many excellent Spanish birds from Holland, where fanciers had long bred them with the greatest care; but there also, this bird has been extensively crossed with an earlier domestic fowl, of a dun or bluish-slate color.

The Spanish has been long and successfully naturalized in Great Britain; but even there in that stereotyped country, they have been extensively crossed with other birds, and for some of these hybrids English authors inform us, names have been applied as though they were distinct varieties.

"The true Black Spanish," says Doyle, "is a most strikingly original and very beautiful bird; one of the few which, without the slightest hesitation, we can affirm to be a really distinct class of domestic fowl." And such is the testimony of all modern authors.

There are but few true Spanish birds in the United States, though there are many *black* birds that pass by that name. One reason for the scarcity of thoroughbred Spanish in this country, arises from the high price such birds command in England, as from $50 to $100 per pair is no uncommon price for first class birds. In that country this bird has long been a favorite; and by way of pre-eminence it is there called "the gentleman's fowl—or the aristocrat of the poultry-yard."

The distinctive characteristics of the Spanish are as follows: "plumage of a glossy black, with brilliant reflected tints of green and purple; an erect serrated single comb; with a clear milk-white face and ear-lobes; dark thin legs, and a lofty carriage."

The beak of the cock is long and slightly curved; head ordinary size; eyes bright and rather full; comb extends nearly to the nostrils, is erect or nearly so, and is always of a bright scarlet in health, except during moulting, when it shrinks a considerable in size and becomes a little darker; the wattles are very long, thin and pendulous; *the entire face should be perfectly white* from the ear-lobe to the beak, and from the comb to the wattle; the neck long, the neck-hackle full and glossy; chest rather broad; wings medium length, the coverts being richly shaded with bluish or slightly purplish black; thighs neat and of medium length; shanks clean, rather long, of a dark blue or leaden color; soles of the feet of a dingy flesh color; tail quite erect, true on the body and well plumed, its color iridescent black, reflecting a greenish metalic shade in the sun. Weight from six to seven pounds.

The hen is thus described: "Head and beak neat, of moderate size, beak colored as in the male; eyes bright; comb single, very large and pendulous; face entirely white, the white extending around the eye; neck of moderate length, neatly set on; body broad; wings of medium size; legs blue; tail long, standing high and well squared; plumage colored as in the male, but less brilliant." Weight about five and a half pounds.

The whiteness of the face and ear-lobe increases with age in both sexes. The ear-lobe should be white at a few months, but the face increases in whiteness until two or three years old; indeed, a good bird frequently shows but little white beyond the ear-lobe until about a year old. Such birds as finally have a pure white face, generally show a face of bluish hue after about five or six months, until such times as it fades out and becomes entirely white. Bright scarlet faces should always be avoided for breeding.

The Spanish hens lay larger eggs than any other fowl, the eggs of old hens weighing from two and a half to three and three-fourths ounces, and are perfectly white. They so seldom become broody that they are often said never to sit; but though they are such bad sitters, if once they perform this office, they make good mothers. They will lay a greater weight of eggs in a year than any other breed. They have frequently been known to lay ten months in a year, laying more than forty pounds of eggs in a single twelve-month.

John Baily, of Mount street, London, says, and we have no better authority:

"They are good fowls to keep in towns; they bear confinement well, and will thrive in a mews or back yard, where others would pine and become diseased; they remain in perfect beauty, as their color does not quarrel with a smoky atmosphere; and as new laid eggs are valuable in such localities, their free laying, and the size of the egg make them desirable."

The Spanish are excellent table fowls, their flesh being fine-grained, very white, juicy, and tender. To our taste we know of no fowl that equals the Spanish, though perhaps for farmer's use the Dorking is preferable. These birds require very careful protection in winter, to protect their large combs and wattles from the severe cold of our northern climate. By some they have been dubbed or trimmed the same as the game fowl; this is no injury, but it detracts much from their beauty; for the thorough-bred Spanish, with their trim, sprightly, and showy forms, bright scarlet comb and wattles, full white face, and their uniform iridescent black plumage, is one of the handsomest and most showy birds, as well as the most useful, with which we are acquainted. Our cut (given last week) is a good likeness of the form and attitude of these birds.

The Spanish has only one true sub-variety, which is the White. White birds have been occasionally thrown from the black; but their young were black again; while a few white birds have been known that bred

their like. They differ from their colored relatives only in the color of their plumage. But possessing no contrast of colors, except the red comb and wattles, the whites have few admirers, and are but rarely bred, even in England, and we know of no good ones in this country.

It is a singular phenomenon in the history of the blacks, that occasionally in moulting, they change more or less of their feathers to a pure white. Mr. John Baily, of London, before referred to, says he has had them "turn quite white." A few years since we had a hen thus change nearly half of her feathers at her first full moult, giving her a splashed or mottled appearance.

The best age for breeding stock of the Spanish, is from two to three years; and too much care cannot be shown in its selection.

Only fresh eggs should be selected for setting; and the first dozen laid by a pullet should not be used for such a purpose; for, with the Spanish, as with all domestic birds, chickens hatched from such eggs are apt to be feeble, requiring more care to raise them than they will ever be worth.

The chicks should not come off before about the first of April in southern Virginia, and the first of May in New-York; but if earlier birds are desired, put no more than eight or nine eggs under the hen. As the Spanish, for all practical purposes, is a "non-incubator," it will be necessary to provide other hens to perform this office, but never select a Shanghai for it, as these are too heavy.

The young chickens should be fed quite often and regularly, for two or three weeks, giving but a little at a time, and that always fresh. Give stimulating food occasionally, such as a little cooked fresh meat, bread soaked in beer or sweet milk; or a few onions chopped quite fine. A little cracked hemp seed is excellent food for chickens when quite small; when older give wheat or cracked corn, but avoid fine corn meal wettad with water, as such feed soon sours, when it is very injurious to all young chicks.

In our next we shall speak of birds allied to the Spanish, such as the Minorca, the Ancona, the Andalusian, and the Leghorn.

Steam Plow in Operation.

Mr. W. Smith, of Woolston, England, under date of Nov. 13, thus writes to the Editor of the Mark Lane Express:

SIR—I have since harvest plowed by steam the whole of my farm, except a bit of wheat stubble left to try an experiment upon in the spring, and a bit of clover-ley plowed with horses. It may be interesting to some of your readers to know the result. I find that the implements exhibited by me at Chelmsford are perfect; that an ordinary seven-horse engine is sufficiently powerful for every useful purpose; that any cold clay, hilly or uneven field may be plowed: that in plowing my bean and pea stubble at a depth of six inches, I did an acre in one hour and thirteen minutes, and an average of five acres per day, including the time for shifting from field to field, at an average cost of 5s. 2d. per acre, including men, coal, water, and horses for shifting; and that in plowing my wheat stubble, at a depth of eight inches on the heavy and ten inches on the light land, I did an acre in two hours, and an average of three acres per day, including time for shifting as above, at an average cost of 8s. 8d. per acre, including men, coal, water, &c., as above; to this must be added interest of money and wear and tear, say 1s. 6d. per acre, which will be the outside, the tackle coming in nearly as good as it went out As to the value of the work, I give it to you in the words of practical farmers who visited me: "On the wheat stubbles the common plow is of no use against yours; on heavy land the spade cannot equal yours; on bean stubbles one plowing with yours is worth more than two with the common plow."

Mr. Quinby's Mode of Bee-Keeping.

Among those who have had most experience in the care and management of Bees, and perhaps the only one who has entered upon it as a business, and conducted it successfully on a large scale, is Mr. M. QUINBY of St. Johnsville, Montgomery Co. We have therefore been at some pains to ascertain his modes of operation, and trust they will prove as interesting as they must be instructive to every careful reader.

He commenced with his first stock of bees in the spring of 1828, and kept them many years with ordinary success, being wholly ignorant on many important points of their nature. What success he had during this period, is attributed entirely to "luck," but becoming satisfied that *luck* consisted more in a correct system of management than mere chance, he commenced a series of observations and experiments to ascertain the causes of failure; this, together with an endeavor to manage them in strict accordance with their nature, has resulted in his keeping his apiary well supplied with bees for twenty-eight years, and he has now on hand several hundred stocks.

For the purpose of obtaining a superior article of honey for market, he left Greene for Montgomery Co., some four years since. In the former place, most of the surplus honey was obtained from buckwheat, which is dark, and only second-rate as to quality. Montgomery county furnishes a much better article, from the greater amount of white clover in the pasture land used for dairying purposes, where it is kept fresh, and flowers in succession for a long period.

It is his policy not to make his bees travel too far in search of stores; consequently he endeavors to keep no more in one locality than can find abundance within a circle of one or two miles. The number of stocks in one place in the spring, is from sixty to eighty. A suitable place of a few square rods is selected; one out of the wind and where there are no tall trees for the swarms to cluster on, out of reach. Clustering bushes are put up where they are needed, as it is important to have the swarms light so as to be hived expeditiously, otherwise several are liable to unite.

When the swarming season arrives, one man makes it his business to be on hand through the middle of each fair day, and hive the swarms as fast as they issue. By convenience and practice the first swarms are generally kept separate. Of the after swarms (second and third,) two or more are united, at least enough bees are put into a hive to make the number equal to a good first swarm. This is an additional security against the moth—all, or nearly all are strong swarms. When a third swarm issues and clusters by itself, it is generally returned to the parent stock, after taking away the queen or queens, as the case may be. But as several of these small swarms frequently issue at one time and mingle together, it is not always practicable. It is quite common to have twelve or fifteen in a day.

The stocks are located in their summer quarters as soon as practicable in the spring, before they begin work. Each apiary is visited once or twice a week through the spring, to destroy what worms can be found, and to ascertain the actual condition of each stock. When any one fails to increase its numbers equal to its neighbors, it is noted and receives particular attention, searching for the cause and applying the remedy. In this way no colony is allowed to be reduced till the worms destroy it. The destruction of stocks by the moth he considers in effect only secondary, that is, nine-tenths of them would be lost eventually without the moth, because they seldom step in, in numbers fatal to the colony, unless the bees are first reduced and cannot repel them, and all the assistance man can give will avail but little. The secret of successfully combatting this enemy is in understanding

how to keep strong stocks. Here he seems to have the advantage over those bee-keepers who mistake secondary for primary causes.

During this period he has never found to his satisfaction, a patent hive so well adapted to the wants of the bee as the simple old box, unless Mr. LANGSTROTH'S should prove to be one. Having recently become somewhat acquainted with its principles, he intends to give it a thorough trial next season. The common hive is the one he uses; the size is 2,000 cubic inches inside measure. Glass boxes are set on the top for surplus honey. These boxes are usually six inches square, five in height—top and bottom wood, sides glass. In the bottom are holes to match others in the top of the hive. Four are set on at once. A large wood box, seven inches deep and thirteen square inside, covers them. They are put on old stocks as soon as any bees are crowded outside; on young swarms when nearly full, unless very near the end of the honey season. The wood covers can be raised at any time, and the boxes being glass, the precise time of being filled can be ascertained. All full ones are immediately removed, and empty ones put in their places. In this way the purest white combs are obtained. The person taking care of the swarms finds time to attend to the boxes.

As a beginning, and to encourage the bees, small pieces of new white comb are attached to the top, by dipping one end in melted bees-wax and applying it warm. This is done before nailing together. By strict care to change the boxes as fast as filled, he has obtained the present summer from three swarms hived after the 18th June, surplus honey amounting when sold, to over forty-five dollars, besides ample stores for winter. But this is above the average.

No bee house or other permanent fixtures are used. The bee house is objected to on account of preventing a free circulation of air, also when the roof and floor are once erected, there is a constant disposition to crowd the stocks too close—beside all this, there is not one advantage to balance the expense of erection. Another arrangement, more simple and convenient is preferred, and where there is room, no particular inducement to crowd the stocks too close. An inch board two feet long and but little wider than the hive, is raised by nailing it to blocks of wood two or three inches from the ground, and supports one hive. It requires a little extra trouble to keep grass and weeds away, but as a compensation many bees are saved, that would be lost when standing higher. A separate roof covers each as a protection from rain and the hot sun. Everything about the apiary not absolutely necessary for the thrift of the bees is avoided, and profit made the leading feature. Stands, hives, covers and roofs, are all left rough, with the exception of a few as specimens, which are ornamented. Yet these produce no more surplus honey, nor send out any more swarms, in consequence of living in a fine house. If there is any difference it is in favor of those of ordinary make.

In his shop, through the side of which the bees work, he has one that he calls the perfect observatory hive, where he takes his lessons in their natural history. It is some five feet high by two and a half feet wide, containing only one comb. Each side is covered with glass, and doors hung on hinges cover these, that they may be opened at any time, and all the operations of the interior studied at leisure. It being inside the building the most timid are perfectly safe from any annoyance from the bees. The workers may be seen discharging their loads of pollen, others soldering the cracks and corners with propolis, nursing the young, constructing combs, &c. And more interesting still, the queen may at all times be seen, and nearly always engaged in depositing her eggs in the cells. Witnessing this single operation, hardly fails to call forth exclamations of astonishment from the most indifferent.

Mr. Q. is owner in whole or in part, of six different establishments. A part of those away from home are brought in on an easy wagon at the beginning of winter, to be housed. A dark room or dry cellar is used for the purpose. The holes in the top of the hive are opened, and they are then turned bottom up on small blocks, which admits a free circulation of air through the hive. No covering is put over to prevent the bees leaving—the perfect darkness of the room is depended on as sufficient to keep them quiet. The air in passing through the hive carries with it all the moisture generated by the bees, and the combs are kept dry and clean. One course of hives is first put down on the bottom close together—a shelf a few inches above them receives another tier, and others still above to the top of the room. Two hundred can be put in a room 10 by 12 feet square, in three courses. Such room is ventilated by an air passage four inches square at the bottom, and the same at the top. He has one room away from home, made above the ground, of the same size, well secured from cold and managed in the same way, with the same good results as two cellars that are used for the purpose; one of them under a barn, the other under the kitchen in the house. Stocks that would perish for want of bees sufficient to produce the requisite heat in the open air, can be wintered here, assisted by the warmth generated by the large number of stocks, without the least difficulty.

As soon as the air is sufficiently warm in the spring for the bees to fly well, the process of setting them out is commenced, and a few set out every fair warm day; if the sun shines warm and the air is still, the snow is no obstacle; when it is melting or has a crust it will bear the weight of a bee. The small number, (ten or a dozen,) set out at a time, is to prevent their mixing, which they are frequently disposed to do on their first issuing, especially such as are in a strange place. Half the bees belonging to three or four stocks have been known to congregate in one. This makes experience available and care necessary.

During the winter, the hives, covers, stands and boxes are made. Of the latter some 1,800 were made last winter; this number was found too few, and near 1,000 more had to be made in the summer. Most of the work is done by machinery; about fifty boxes 10 by 12 glass, were used and cut to the proper size by himself.

Mr. Quinby's system of management is followed successfully by several of his friends and neighbors. The proceeds the past summer in quite a small section of the country, have resulted in accumulating about 2,200 pounds of box or surplus honey, and 3,000 pounds of strained honey; the actual sales amounting to over $5,000, beside some three or four hundred lbs. of wax.

How many sections of country in our own State, of the same area, has produced an equal amount only to be wasted on the "desert air," that might have been saved by simply furnishing means to collect it? and that consists in keeping and multiplying stocks of bees. Why not save it? Mr. Quinby has given us an example, and demonstrated its feasibility by his practice.

Those wishing further particulars of Mr. QUINBY'S system, should consult an advertisement in this week's paper, and obtain a copy of his "Mysteries of Bee-Keeping Explained."

Dioscorea Batatas or Chinese Yam.

My opinion coincides with that of those who think this esculent very much, if not altogether a humbug, notwithstanding the flourish of trumpets which heralded the introduction of this "celestial" stranger among us the past spring. I planted the vegetable in question here, in excellent soil, and had it planted about eighty miles south of this, on the eastern shore of this State, near Easton in Talbot County. In neither instance did the tubers increase more than two inches in length, nor were their diameters very sensibly enlarged. It would require two or three dozen of such vermin of vegetables to equal in size one respectable sweet-potato. I think the Dioscorea batatas may be set down as "very small potatoes and few in a hill." E. L. R. *Baltimore.*

Good and Bad Management.

We have sometimes thought that if farmers could see before them in all their distinctness, bad winter management on one hand, and good management on the other, side by side, it might serve as a stimulus to adopt the one and avoid the other.

The bad farmer throws his fodder on the ground, to be trodden under foot, or to be worked into the mud. The good farmer provides good but cheap racks, where all is saved.

The bad farmer allows his cattle and sheep to feed in the open fields, swept by every wintry tempest, or storm of sleet and snow. The good one provides good, clean, comfortable shelter, where the animals thrive and keep fat, and save a large portion of the feed otherwise required to keep up their animal heat.

The bad manager permits his winter swine to procure their own lodging where they can best find it—in the corner of the barn-yard, in the manure heap, or under some transient pile of straw, exposed to rains and snow drifts. The good manager provides a comfortable hog-house, and takes especial pains that they have good *dry* bedding, and that every thing about them is kept *clean*.

The poor farmer lets his calves run wherever the older cattle drive them, and by spring they look very much like fig. 1; the good farmer gives his calves the best chance of all his cattle, feeding them with meal and hay, and keeping them well stabled by night and properly sheltered by day, and in spring they look like fig. 2.

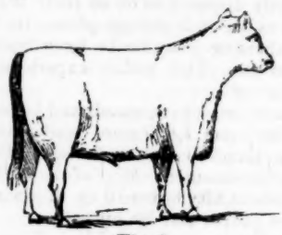


Fig. 2.

Fig. 1.

The careless manager lets his fowls roost in the apple trees, on the fence, or wherever they can make a foothold, or at the best, in his carriage house, just over the seats of the carriage as it is laid aside for winter; the careful manager has a comfortable special roost for all his feathered tribe.

The bad farmer does not wish to be instructed—he "knows already more than he can practice"—the good farmer takes an agricultural periodical, and learns from it every year fifty times its cost, in various practical hints.

Hints for the Year.

There is not a *reading* farmer in the country who thinks he has attained perfection on all points. With such there is consequently much improvement to make, and the most practical, and substantially beneficial, should be undertaken first. In order to assist in this good work, the following hints are given:—

1. ROTATION—Let the farm be suitably divided, and reduced to a regular system of rotation in crops. Many spend much time and thought in determining what they shall occupy this field with, and what they shall plant in that field; and perhaps they change their minds half a dozen times in a month, and after all get their succession of crops into confusion. We have known a farmer, who after fully digesting the matter, and arriving at the best rotation, adopted and continued it without a variation for twenty years—all his crops as a consequence, were heavy, and his fields continued clean. Farmers generally will arrange a course to suit themselves in their own peculiar circumstances of soil, climate, and markets. The following with variations, may be adopted: 1, corn and roots with the manure; 2, wheat; 3, clover, in meadow and pasture. This is a short and simple course. A larger one is, 1, corn and roots; 2, barley, oats, beans or peas; 3, wheat; 4, clover for meadow and pasture, for one, two, or three years. In districts where every kind of wheat fails, rye may be substituted, or perhaps better, this year of the course may be omitted, making it, 1, corn and roots; 2, barley or oats; 3, clover.

2. BUILDINGS.—No farmer can carry on his business satisfactorily, who is not well supplied with farm buildings. Yet some buildings are more important than others. Shelter for his animals, and cover for his tools, carts, &c., are absolutely indispensible. The waste of food, and the reduction of flesh, and loss by death, which we have known to occur with many farmers, has been enough in two years, to pay for well constructed buildings. Implements, wagons, plows and cultivators, left exposed a year or two, will be either ruined, or so weakened by cracks, warping or decay, as to break easily, and result in a most serious loss of time in repairs, at critical periods of work. Sheltering grain, hay, and straw, are very necessary, but less so than tools and animals.

3. CLEANLINESS.—This includes, first, cleanliness of animals, and every provision should be made for preserving them free from all kinds of filth, and for clearing away manure in the most thorough and expeditious manner; for dirty animals, not excepting even pigs, do not thrive nearly so well as clean ones. Cleanliness embraces, secondly, clean fields, or freedom from all kinds of noxious weeds. Some men are exceedingly sharp at a bargain with their neighbors, but allow a loss equal to ten times as much as they make by their sharpness, by the exhaustion of soil under great crops of mulleins, thistles, burdocks, elders, johnswort, pig-weeds, foxtail, red-root, chess, &c.

INCOME AND EXPENDITURE.—The farmer who would know by figures what part of his operations yield him the most profit, and by what he is losing money, must keep accurate accounts, not only of his purchases and sales, but with every crop, what it costs, and the sum it brings him—with all the *indirect* influences on the fertility of the soil, manufacture of manure, preparation for succeeding crops, &c.

BEST MARKETS.—It is of great importance to ascertain whether selling corn, barley and other grain, to the grain dealers directly, or feeding it and converting it into beef, pork and mutton, brings the highest price—the value of the manure made by animals being also taken into the account. This can only be ascertained by careful experiments with the best and most approved modes of feeding, in connection with accurately weighing the animals at stated times, and weighing or measuring the food, and comparing carefully the results.

UNDERDRAINING, has in many instances paid for itself in two years, in increased crops. The loss by its omission is therefore very formidable. Every farmer should at least *try* it on a small scale, and observe its effects.

EQUESTRIANISM AT FAIRS.—I have been surprised to see a notice in Country Gentleman, of the Auburn Ag. Fair, signed by Mr. Dill. He nor any one else could have written a better burlesque on said fair. The only attraction there, was the *race course*. I fear very much that such attachments to our fairs will run them down. Our farmers should drive all such equestrianism from the field. J. WALLACE. *Victory, N. Y.*

WOLF TEETH IN HORSES.—We have a horse fourteen years old next spring. About six months since he went blind in one eye, and on examining his mouth we found *Wolf teeth*. This horse was at "mature age," and one year ago his eyes were sound as a dollar. H. S. *Steuben, Ohio.*

A Fact in Regard to Breeding.

It is a fact we believe well established, though seemingly not generally known, that the *first* calf which a cow produces is generally a more perfect specimen than any future one. This is especially true, it is said by observing breeders, in relation to Short-Horns. This fact may be explained by the very reasonable supposition that a fœtus in the womb will fare much better and become more perfect, when it receives all the spare nourishment of the system of the mother, than when part of that nourishment is carried off in the form of milk.

It is farther thought by some to be a fact, that when a calf is allowed to suckle a cow there is more injury done to a fœtus in the womb, than when the cow is milked by hand. The sucking calf will do better indeed, but at the expense of the next offspring of the cow.

From the former fact alone, or from both taken together, it follows as an inference that in those cases in which it is desirable or well-judged policy to do the very utmost that can be done to procure an animal of the highest possible excellence, or to improve a breed, the parent female should neither be milked nor suckled, but be either a heifer, or placed in circumstances as nearly resembling those of a heifer as possible. A foster mother, possessing a full flow of milk should in such cases be provided for the calf, and the breeding cow dried up as soon as possible. Such a course is of course expensive and unnatural; but we are speaking only of cases in which it seems best to do the very utmost that can be done to secure the greatest perfection possible, or the production of a superior specimen of some particular breed. When high prices can be readily obtained as at present, for such superior specimens of a few favorite breeds, the expensiveness of the course suggested will be very certainly counter-balanced by an extra price.

After pains have been taken in this way to produce a suporior specimen of any particular breed, judicious feeding, shelter and moderate exercise, must do whatever else can be done towards the full accomplishment of the object.

Horses Too Well Fed.

Messrs. Editors—Under the above heading, some comments upon extracts from the Veterinary Journal, rather excited surprise. In those comments doubts are expressed in relation to horses eating too much hay or grass when regularly fed. I have pursued farming as an occupation for more than thirty years, and my whole experience had led me to a different conclusion. Among the many horses which it has been my fortune to own during the time, a number of them were inclined to eat entirely too much hay when regularly fed; and this disposition seems to strengthen very much by habit. The supposition that a horse must be supplied with as much hay as he will eat, be the quantity more or less, is quite prevalent among persons commonly employed upon the farm. In some cases this idea is so persistent in its character, that it causes considerable trouble. Some of my horses are so strongly inclined to gorge themselves with hay, that they are often in a condition unfit for work upon the farm or travel upon the road; and it is hard to persuade an employee from stuffing the manger with hay as long as he finds the horse will eat it. This disposition is by no means confined to horses. Cows frequently gorge themselves with clover until they become enormously distended, and lay down in distress for half the night. The same consequence often happens when they are turned into a field after the corn and stalks have been carted out in the fall. Cases of death from both these causes have been mentioned to me by farmers in this quarter. Nothing of that kind has taken place among my stock, for the reason that they have not been suffered to run in such fields too great a portion of the day. I would that the habit were peculiar to the quadruped races, but alas it is not, and if the biped, gifted with reason, cannot exercise a proper control over his sensual appetites, what right have we to expect it among the brutes. R. M. Conklin.

Winter Management of Cattle.

Messrs. Tucker & Son—While travelling through Bainbridge, N. Y., a short time since, I was kindly entertained by Mr. John Banks, a young farmer of much spirit and enterprise, and as he has a "*new*" mode (to me) of feeding his cattle, which I think worthy of description, let me attempt it for your paper.

Mr. Banks does not stable his cattle, but allows them an open shed and yard, with stalls two and a half feet wide, to feed in. The hay or straw is thrown into the manger from above, which is all eaten without the least waste—they are prevented by an upright from getting into the manger.

My impression at first sight was, that the cattle occupying the stalls would be liable to be injured from other's "hooking" them, but the elevation of the stalls of about ten inches, is a preventive for this. No animal can injure another with head up; a *savage brute* always goes with *its head down* when bent on mischief; therefore cattle are all safe when in them. To more fully convince me on this point, I saw the underling cattle run there for protection, and then feed without fear.

Mr. Banks has a trough of running water in his barnyard. The cattle go in and eat until thirsty, when they go out and drink, return into another stall and feed again, having an opportunity to eat and drink as it suits their palate, which in my opinion much benefits their condition. When stabled they are only watered once a day; they drink too much, and frequently stand shivering in the cold a long time afterwards, much to their injury. I like this plan very much, and would advise you to get Mr. Pearsall of the same place to give you a description of his, which is an improvement; his being double stalls under his barn, the heads of the cattle facing each other, and lanes to his water trough for each class of cattle. I have a very favorable opinion of this mode of feeding, and such yards and sheds can be made warm enough.

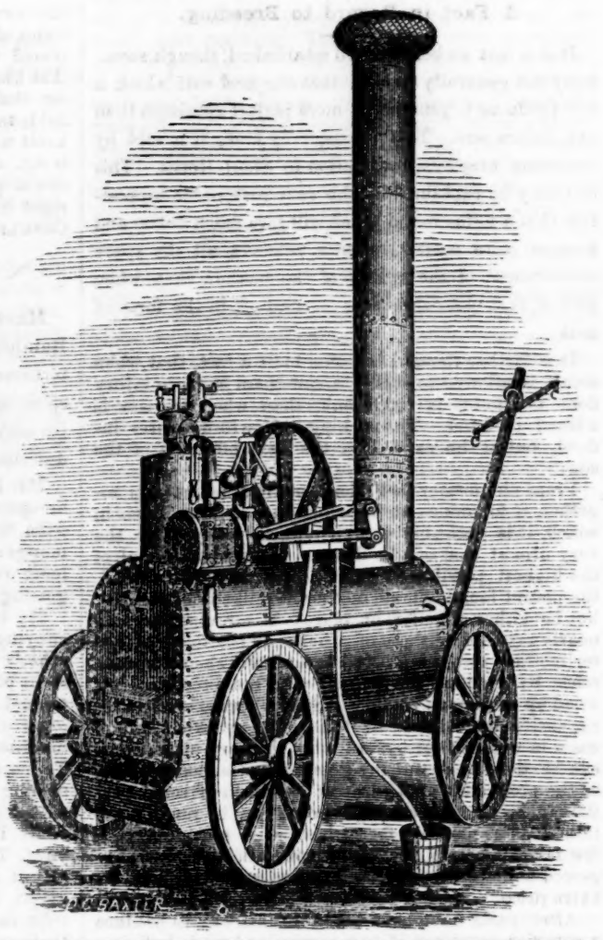
Mr. Banks has a very clever Devon bull of first quality, bred by Mr. Van Rensselaer of Butternutts. His cows are three-quarter bred Devons, good size and shape, from which he will be enabled to establish a profitable herd. Wm. H. Sotham. *Owego, N. Y.*

Wolf Teeth in Horses.

Wolf teeth are quite common, and many good horses are made blind by them. I had two horses or colts, which had them last season. The cure is simple and easy. Take a piece of iron with a square end, one-fourth of an inch in size. Let one hold the horse and open the lip so as to enable the one with the iron to place it against the tooth, and with a small mallet knock the tooth out. There is no root to the wolf teeth. The best way is to take the horse to a blacksmith shop, and the smith with his punch will knock them out in two minutes. When you see the horse's eye begins to run and look glassy, look for the wolf teeth. It is a small sharp tooth just forward of the grinders of the upper jaw. John S. Pettibone. *Manchester, Vt.*

Farm Engines.

The accompanying cut represents the portable steam engine manufactured by Messrs. HARLAN & HOLLINGSWORTH at Wilmington, Del., an advertisement of which will be found in another column. It is manufactured with or without Wheels and Axles—built of different sizes, from four to forty horse power—includes a smoke stack made to strike, and covered with a spark catcher—is said to be perfectly safe, economical of fuel, &c., &c.



It is scarcely necessary to bespeak public attention for a subject already attracting it so generally as the employment of steam for farm purposes. We merely make the present a text for a brief description of a steam thrasher invented in France, and about a hundred of which are said to be already in use in the western part of that country. Its principal novelty is the idea of placing the boiler, engine, thrasher and all on the same frame, whereby ease of locomotion is greatly increased. They are constructed at from 3 to 4 horse-power—price between $700 and $800. In the steam-engine the motion of the piston rod is communicated by a crank shaft to a lying shaft armed with a fly-wheel; at the extremity of the shaft is a driving pulley of the same diameter as the fly-wheel. On this pulley a broad galvanised gutta-percha belt runs, and communicates the motion to a pulley of small diameter. This pulley on the shaft of the drum carries round the drum at a speed of 1200 revolutions a minute. In 12 hours this simple machine can, it is stated by the engineer, thrash from 600 to 800 bushels of wheat, the quantity depending on the length of the straw and the yield of the grain.

Dysentery in Animals.

We are not aware that *tannin*, in its modern preparation for the use of physicians, has ever been used for curing diarrhœa and dysentery in domestic animals. We are inclined to think that with proper use, it may prove one of the best of medicines, and we would suggest its use to those having charge of sick animals. We are induced to do so at the present moment through a statement we have just received from a gentleman possessing much medical skill in the *common sense* as well as scientific department of the art, of several cases where diseases of this character in the human system, were promptly cured by the use of oak decoction, when other remedies had little or no effect. He made simply a decoction of the inner bark of the white oak, about as strong as common coffee, and gave three swallows, once in three hours, a little buttermilk in the mouth instantly removing the unpleasant flavor. He thinks it has not merely an astringent but a *chemical* effect, as it instantly destroys all unpleasant odor We have little doubt that a proper quantity of druggists' tannin, which is found so efficient in human beings, would be eminently useful with cows, horses, &c.; or the decoction, above described, administered in the usual way by means of a junk bottle, a pint or more being given at a time, would doubtless produce an excellent result. There is a possibility that the decoction from the fresh bark may possess some additional virtues, not retained by the prepared tannin. We offer the suggestion, and not improbably some of our readers may have already given the remedy a full trial.

Hammon's Hand Seed Planter.

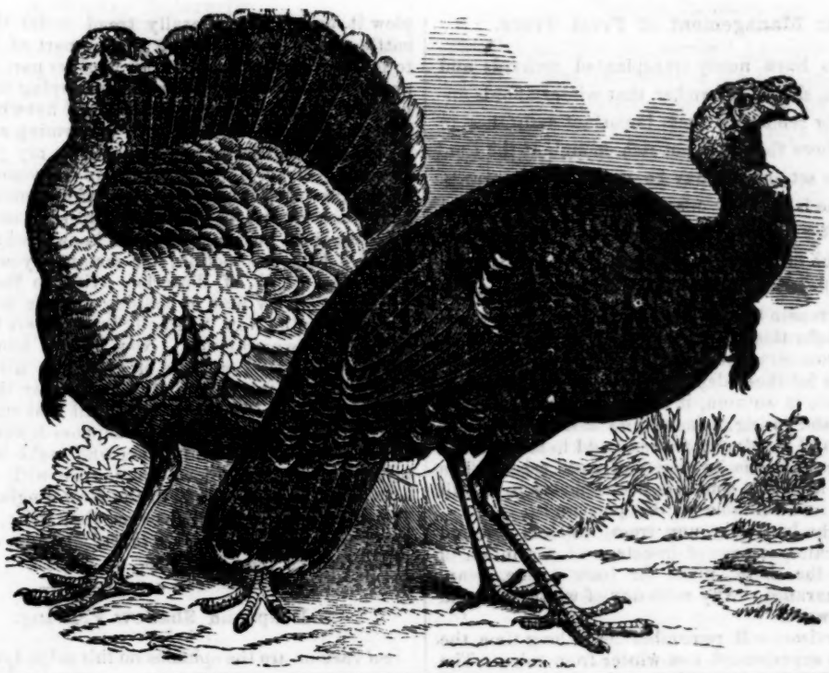
Mr. HEMAN B. HAMMON of Eristolville, Trumbull Co., Ohio, has invented and patented a new hand seed planter, which is figured and fully described in the Scientific American, which, so far as we can judge from the figure and description, promises to be a valuable implemennt. That paper says:

This planter is extremely simple in all its parts, durable, and not liable to get out of order. It is adapted to the planting of corn, cotton seed, pumpkin seed, either mixed or not with corn, and to all other kinds of seeds that require to be deposited in hills. The construction of the machine is such that it cannot clog up, no matter what kind of seed is to be planted. It works equally well whether the ground be dry or moist. We regard it as an excellent improvement. For further information address the inventor as above.

Great Hay Crop.

A letter published in the Worcester Palladium, from Grenfield, Mass., says:

"A very considerable portion of the land in this town is of very excellent quality for agricultural purposes; and for the production of grass some of it excels any that I have ever seen or heard of. One gentleman, Henry W. Clapp, Esq., gathered forty-nine tons of good hay from seven acres of ground in one season. It was cut in two crops, averaging four tons to the acre at the first crop, and three tons to the acre at the second crop."



Improvement in Breeding Turkeys.

MESSRS. EDITORS—For the few past years very much has been written and published in regard to the various breeds of dunghill fowl, while scarcely anything hasbeen said of the Turkey; and although he stands at the head of the list on the table, the majority of your readers are doubtless unaware that he is susceptible of any improvement in regard to size and docility. Four years since it would have been a difficult thing in this vicinity, to have procured a full grown cock turkey that would have exceeded eighteen pounds dressed weight, or a hen turkey that would dress more than ten pounds. Since then, I have, at considerable expense and trouble, so improved the turkeys in this vicinity, that I can now readily find many young ones that at this season will dress quite as heavy as our best old ones used to, when full grown, while our best full grown toms range from 25 to 30 lbs. dressed weight, and hens from 15 to 18 lbs., dressed. I have a pair, that when fat have weighed 52 lbs., live weight; and I have young toms that were hatched in June last, that now, Dec. 10th, weigh 22 lbs., alive, and hens hatched at the same time that weigh 17 lbs., live weight. I once raised a hen turkey which at nine months old weighed 21 lbs., alive. The difference between the live and dressed weight, may be obtained by subtracting three pounds from a tom, or two pounds from the hen. The result of a single cross on our old fashioned small breed, has scarcely failed to add four or five pounds to their average weight at this season of the year, on those hatched in May or June.

They not only weigh more, but are much more quiet and gentle, less inclined to quarrel among themselves, and being longer in maturing, it pays much better to keep them late (in Jan and Feb., when the prices are generally higher,) than it does the small kind. They are not perhaps a distinct variety, but have obtained their great weight by a continuous and judicious crossing from the largest and best. They are equally compact and snug made as the small kind. The only peculiarities they possess, that I can perceive, is, the hens, however old, scarce ever have a beard, and they are inclined to elevate their tails more as they walk, as though they were afraid of getting them drabbled and dirty. E. ALLIN. *Pomfret, Conn.*

Fruit-Grower's Association of Western New-York.

The Fruit-Grower's Association of Western New-York met, according to adjournment, in the Court-House at Rochester, on Jan. 7th, at 11 A. M. The President not being present, A. STONE of Hinmanville, was appointed pro. tem.

The election of officers being in order, the following persons were elected to serve the society for the coming year:

President—JOHN J. THOMAS of Union Springs.

Vice-Presidents—H. P. Norton, Brockport; Asa Rowe, Sweden, and E. C. Frost, Catharine.

Secretaries—J. B. Eaton, Buffalo, and H. E. Hooker, Rochester.

Treasurer—W. P. Townsend, Lockport.

Executive Committee—P. Barry, Rochester; T. C. Maxwell, Geneva; H. E. Dickerson, Lyons; W. B. Smith, Syracuse, and P. R. Freoff, Auburn.

P. BARRY, from the committee to prepare business for the Association, made the following report, which was adopted:

1. Small Fruits—which of them can be grown on an extensive scale profitably?

2. Shelter of Orchards and Fruit Gardens—Is it important, and if so, what trees, plants, and shrubs, are most suitable, and what form of plantation?

3. Hardy Grapes—Can their culture, in the open air, be made profitable?

4. Is it better to top graft old apple trees, or to plant new ones?

5. Is it a good practice to renew peach trees by heading them down?

6. Winter Pears—Can they be grown profitably?

The number of members in attendance was large, and much interest manifested. The exhibition of fruits—principally apples and pears—was large—much larger than expected. The following persons exhibited fruits, mostly fine specimens: Ellwanger & Barry of Rochester, 22 kinds of pears—A. Covey of Penfield, 21 kinds of apples—J. B. Johnson, Naples, 18 kinds of apples—R. H. Brown, Greece, 20 kinds of apples—J. Nelson, Brighton, 3 kinds of apples and 1 of grapes—L. Barber, Bloomfield, a fine seedling apple, called the "Golden Gloss"—J. Park, Rochester, 16 kinds apples.

Winter Management of Fruit Trees.

Those who have newly transplanted orchards and fruit gardens, should remember that winter affords opportunities for rendering them important assistance in growth. Where the soil is not rich enough at the time the trees are set out, it may be made so afterwards. The best time is to apply manure *to the surface* in the fall; and after undergoing a thorough washing into the soil by the fall, winter, and spring rains, it is to be spaded or plowed in before the heat of summer. If there is any reason to apprehend injury from mice, the manure used for this purpose should be either well-rotted or free from straw or coarse fibres, which might afford a harbor for these depredators. If no application has been made in autumn, it is still not too late, as the late winter and spring rains will do essential service. We have found it advantageous to add to the manure about one tenth to one twentieth of wood ashes. The spent ashes from the common domestic leach, is still quite strong and valuable for this purpose.

Washing the bark of young trees, which is infested with moss, scales, or eggs of insects, with a solution of sal soda of the shops, gives the bark a fine, clean, healthy appearance. Any mild day of winter is a good time for the work.

All fruit raisers will remember for a long time the heavy losses experienced last winter from mice. The sharp frost of the past month, together with the small amount of snow in most localities, has served to check them: and we hope not to hear from them soon. Banking up around the stems, as we have heretofore described, has always proved a most efficient remedy in all ordinary instances; but if this has not been attended to before the freezing up of the ground, it will be an important precaution to tread the snow about the trees a few inches on each side, whenever there is a fresh fall of snow or fresh drifts.

Owners of young orchards, who wish to avoid thick, badly shaped, or distorted tops to their trees, should remembar the old rule, "Just as the twig is bent, the tree's inclined." A crooked shoot now, will make a crooked bough when the tree becomes large; small cross shoots will be large cross branches; an uneven head at the start, will make a lop-sided fully grown tree. By forming the head when young, every thing may be done with a single cut of the knife, that in future years would require hard labor with the saw, and leave large wounds besides. Mild days of winter afford good opportunities for pruning and shaping young trees.

We intend on a future occasion, to give more particular directions for pruning, with illustrations.

Management of Farm-Yard Manure.

MESSRS. EDITORS—I notice that some of your correspondents, as well as the correspondents of other agricultural papers, are out against the heaping of manure from cattle and sheep yards. Now, I am satisfied these writers do not make manure, or else they are those who make all the fodder they raise, straw and all, pass through the stomachs of their stock, and the stock wade through and lay in mire in soft weather, with nothing to absorb the liquids, and on frozen lumps of manure in hard weather, by which means the stock come out in spring so poor that after three months good pasture they are not as good as they were the previous fall. I think such keeping will not pay. It would be absurd to heap such manure, as it is fine enough for all purposes at any time.

I would like to see these men take out the manure from such yards as mine, spread it, and attempt to plow it under. I generally tread under the feet of cattle and sheep by far the greater part of from fifty to seventy acres of wheat straw, besides part oat straw; and if that manure don't require heaping and rotting before it is spread on the land, then I have been living in ignorance of the best part of farming all my life. I have now 530 sheep and 15 cattle in my yards, and spreading straw daily. Any man of common sense might know that it must be rotted after summer comes, as it won't rot in our winters. That some of those who write against heaping manure, know nothing of the practice I have no doubt; for instance, your old correspondent S. W., of Waterloo, writes to the Genesee Farmer, that my plan of heaping manure may answer very well in the New England States, where they make compost of swamp muck. Now I don't know that S. W. ever cultivated an acre of ground in his life. He has resided in the village of Waterloo for the last 40 years, and I am told that during all that time he has cultivated his garden only. I suppose it never occurred to S. W., that I, and others who make wheat our principal crop, tread down more straw with stock than is done in a whole county in the New-England States. If men would only practice before they write, it "*would from many a blunder free them.*" JOHN JOHNSTON. *Near Geneva, Dec.* 24, 1856.

Deep and Shallow Plowing.

So various are the opinions on this subject, as expressed in the manuals of culture, and the weekly publications, that positive authority can be found for either—leaving the anxious inquirer for truth in the condition of "the ass in the fable, standing between two stacks of hay." So far as my own observation has extended, I have never known any injury to accrue from sinking the plow to a generous depth—provided a corresponding application of fertilizing material was made to the land at the same time—but on the contrary, I have often known the labor applied to land almost entirely sacrificed, for the want of proper attention to depth in plowing.

There is scarcely any plant cultivated, the roots and fibres of which will not sink to the depth of 12 inches or more, if the soil is in condition to admit of such penetration. Take for instance *Indian corn*, a plant more extensively grown than any other—what depth should the land be stirred for the most advantageous growth of this crop? Should it be *six* or *twelve* inches? I say *twelve inches*—and whosoever attempts to operate less than this, "takes in at the *spicket* to let out at the *bung*." I know that there are those who say that their lands will not admit of being plowed so deep, and that they have raised as fine crops as any of their neighbors, and have never suffered a plow to sink on their fields to a greater depth than *six inches*—and that they would not thank a man to plow deeper than this. I have heard this said by gentlemen who stood *high* in the world, whose opinions were referred to as authority wherever they were known, chiefly because of the *authoritative manner* in which they were uttered. The truth is, the time is gone by when any man's *ipse dixit* is to be taken for law in the culture of the land or in relation to the rights of man. Facts, established by repeated experiments, in accordance with scientific demonstration, can only be relied on in the management of the farm, or in the government of the State. W. *Mass. Jan.* 1, 1857.

POTATOES.—The potatoes sent me from Albany, have all done well but the White Mercer, which nearly all rotted. The Strawberry and Chase potatoes are excellent. The English Kidney we think is much the same as the Kidney we have cultivated for a long time. W. DENNIS. *Bucks Co., Pa.*

A Winter Enterprise.

There is nothing in which farmers generally exercise closer calculation than in ascertaining the market prices for their produce. A difference of a cent or two on the bushel is closely watched, and he who happens to sell at the very summit of ruling prices, is looked upon as especially lucky, even if the difference is only one per cent. from the amount obtained by his neighbors.

We here allude to the ordinary cash markets.

But there is another market to which farmers carry a large portion of their grain, where their usual acuteness of observation in watching the best opportunity, appears to have entirely forsaken them. In many instances they do not know within *fifty per cent.* what they really have obtained. We allude now to the market obtained through the agency of growing and fattening animals, which consume the crops, and in this way perform the office of *middle-men*, between the farmer on one hand, and the pork and beef buyer on the other. He who sells a hundred bushels of corn, knows to a fraction how much he gets for it; but for the hundred bushels fed to cattle, sheep, or swine,—all is dim conjecture. We have positively known some men, who have fed out grain to their animals by hundreds of bushels yearly and for many seasons in succession, who at last discovered by a careful trial, that the management they had adopted, only brought them one-half or two-thirds the price they might have had, if they had sold their crops directly in market.

Why are farmers so precise and attentive to prices by one mode of marketing, and so careless in the other? Simply, we suppose, because some little trouble or labor is required to ascertain what they get in one instance, which is not needed in the other.

Now we propose that all those who feel any degree of interest in the question whether they are to make or sink a hundred dollars yearly, in the way we have just pointed out, should make it a winter's task to determine the question with some degree of accuracy, and discard guess-work in future.

Nothing can be done without a *weighing machine*—either such a one as is used for weighing loads of hay, which is best,—or a large Fairbanks' scale, with a platform attached, so that an animal may be driven on it and weighed with little trouble. The first thing, then, is to ascertain the weight of all animals, and note the number of pounds. The food given them should be all accurately measured, and the various approved modes of preparing it adopted. Winter affords the best time to obtain information as to the best modes of feeding practiced by the best farmers; and a thorough and accurate trial may be now made. Although the process of fattening is most extensively carried on during *autumn*, yet that busy season does not admit of experimenting in full, unless some previous preparation has been made for it in the way we have designated; and there are enough ways of trying experiments in feeding store animals and winter beef, to occupy attention for the first winter. We are sure that no labor will ultimately afford a more profitable result.

It is hardly necessary for us to point out minutely the mode of conducting these experiments, but we would merely suggest in a general way, determining the relative value of hay and grain for producing flesh, the two variously combined, of hay and straw chopped fine as compared with unchopped; of ground, and cooked grain, with uncooked; the comparative effects of different grains and roots as food; the influence of shelter, cleanliness, and many other causes which will suggest themselves to the intelligent farmer.

Good Pig.—Mr. Janes, Superintendent of the Orphan Asylum in this city, last week slaughtered a 19 months old pig, which weighed when dressed, 528 lbs.

Turnip Culture.

The Patent Office Report (1855,) contains the statements of several cultivators of the P. O. imported turnip seeds. Twenty-six named varieties were grown by each of four of the experimenters, and a less number by two others.

Mr. J. T. Andrew of West-Cornwall, Ct., grew Ashcroft's Swede and Lincolnshire Red Globe—"seed sown in drills, 18 inches apart—8 inches from plant to plant. The tops of the Lincolnshire Red were very large, extending from the opposite extremities of the leaves four feet."

Charles A. Nason of Hampton Falls, N. H., grew 26 varieties—sown in drills, 18 inches apart, plants thinned out from 5 to 8 inches.

The other experimenters did not state the distance of the drills or plants.

Having grown several of the same varieties, I am gratified to find they agree with me in highly commending Ashcroft's Swede and River's Stubble Swede turnips. For the table, I know of none better, and hope they may soon come into general cultivation. But I think Messrs. Andrew and Nason planted quite too thick to obtain either the largest crops or bulbs. In the Co. Gent. of Dec. 13, 1855, I gave some account of my growing several varieties of turnips—the drills 27 inches apart. Lincolnshire Red Globe, and two other similar varieties grew immense leaves. These plants were thinned to the distance of about two feet in the drills. With such tops, I thought two feet near enough. The turnips were very large and regular shaped, which I think would not have been the case had the drills been only 18 inches distant, and the plants from 5 to 8 inches, with tops 4 feet across. The Swedes were thinned out from 12 to 18 inches, and they were as nigh perfection as a turnip can well be.

I sowed a number of drills of Rape seed. They came up as thick as "spotters." I kept thinning till I got them about two feet each way, and was satisfied that was near enough. The past season again raised the Rape plant; negleted to thin them out in season, and instead of growing large, bushy plants, they ran up tall, and but few leaves, compared with those plants having a wide birth, so that what I gained in number was more than cancelled in loss of weight. Sun, light, air, and room, are necessary to grow the turnip tribe of plants in the greatest perfection. From 27 to 30 inches between the drills is the rule in England, for Swedes and most other turnips. Carrots, parsnips, onions, &c., will do well in 18 inch drills. L. B.

Agricultural Exhibitions.

Hon. W. C. Watson—a delegate from our State Ag. Society to the Vermont State Fair—in his report, after speaking in the highest terms of the exhibition of horses, says:

While the friends of progress in our husbandry must rejoice at these evidences of advancement towards perfection in this noble animal, it may well be doubted whether the great prominence given to the horse at our Fairs, which each year becomes more apparent, is not calculated to exert a depressing effect upon the exhibition of stock in other departments. The fascination of the ring absorbs the attention of the spectators, and overwhelms every other interest. The choicest show of cattle and sheep enlists little consideration, and our Fairs, under the influence of these circumstances, are in danger of degenerating into scenes of mere horse racing and trotting matches. The tendency of these facts must be to alienate from our societies the sympathies and co-operation of those who are adverse to such exhibitions. We were gratified by the absence of all female equitation.

Economical Modes of Feeding Horses.

MESSRS. EDITORS—The usual mode of feeding horses during the winter months, which consists in giving them about as much hay as they will eat up clean, together with an allowance of grain, is a pretty expensive one. In seasons when there is an average or abundant crop of hay and grain, with the prices also about an average, few farmers, probably, ever make a calculation of the cost of keeping their horses in the usual way, or resort to any more economical mode for the sake of having a larger quantity of hay and grain to sell. But when the hay and the oat or corn crop fall below the average, and there is, of course, an insufficient supply of these articles for the general demand, and consequent high prices, then farmers, as well as those who keep horses in cities, are apt to have their thoughts employed at times upon the subject of what it costs to feed a horse during winter in the *ueual* way, and to devise and adopt some mode by which the expensiveness of the usual one may be somewhat reduced.

The general impression seems to be, that when foddering is kept up for six months—say from the middle of November to the middle of May—that it requires, according to the usual way of feeding out hay, nearly three tons for a horse, and about two tons for a cow or ox. At $10, $15, or $20, or any intermediate price, it may very readily be seen that feeding out hay, in the common way, is a *very expensive* mode of wintering horses and other stock, without taking into account the value of the grain which is usually given to horses in addition to the hay. The importance of devising and adopting some more economical mode of feeding horses and other stock is also readily apparent.

Among the methods most readily suggested or most generally known is that of cutting up oats in the bundle, by means of a common cutting box. When cut into inch or half-inch lengths, it is said that a horse will eat up all the straw quite clean, and that when the bundles are of a goodly size and yield at the rate of a bushel or a bushel and a half to a dozen, a horse not working hard will require but little hay in addition to the chopped straw and grain thus supplied.

Another method spoken of very favorably as being at once very excellent and very economical, is reported by a neighbor from Pennsylvania, who says that one farmer with whom he lived when a young man, frequently cultivated a mixed crop of barley, oats and peas, for feed for his horses. The seed sown consisted of a mixture of two bushels of barley and two of oats, to one bush. of peas, and the crop is said to have been a very heavy one, when the soil was rich and the summer not excessively dry. As the crop was cut when when the barley was about ripe, or some days before the oats had attained to maturity, the oat straw must have had more nutritive matter as well as a better relish. It is also said that horses eat this readily when chopped up, and did well on it as their principal food. How the awns of the barley were got rid of, or prevented from doing mischief, our neighbor cannot inform us.

As corn, at usual prices, supplies more nourishment than any other article usually employed in feeding horses, it furnishes the essentials of an economical mode of wintering horses and other stock, so far as mere *nutriment* is concerned. At one cent a pound corn would cost only $20 a ton, and furnish twice the amount of nutritive matter which hay or ordinary samples of bran would do. But neither corn nor oats can be fed exclusively, though furnishing all the required nutritive matter, as a certain amount of *bulk* is as essential as *nutriment*. To obtain this, straw of any kind, with carrots or other roots may be used. To make straw palatable, it should be chopped up fine, and mixed with a little chopped hay, or *well coated* with meal of corn, or corn and oats mixed, so that the meal and straw cannot be separated. If a horse requires about 30 lbs. of hay per day, to supply the requisite amount of *bulk* and *nutriment*, it is easy to determine what amount he must have of straw, carrots, ruta bagas, or other bulky matter to obtain the requisite bulk, as the nutriment of that amount of hay may be supplied by about 8 lbs. of meal, with the addition of that contained in about 30 lbs of straw, or straw with carrots, which is usually estimated at one-third to one-fourth of that contained in hay. Of straw and roots together, or of straw alone, there need not be more, certainly, than from 25 to 30 pounds.

As this mode of feeding is sufficiently economical to allow of a little extra labor in preparing the food, we may mention a method of management which we have tried, with apparently good results. Taking the quantity of meal which we intended for a span of horses for the next day, or about 15 lbs., we put it into a large pail or tub, and poured upon a sufficient quantity of boiling water to cover it when stirred and settled. This was done the evening previous. Into this we stirred about two ounces of salt. This scalded meal being thinned sufficiently, next day was poured upon straw, cut very fine, and adhered better than when unscalded, so as to make the horses eat the straw clean.

For the sake of variety, which horses as well as other animals crave, we would cut up corn-stalks, coarse hay, or whatever other fodder might be about, occasionally; and when horses were much used, we would use a mixture of the meals of oats, beans or peas, with that of corn.

In some London stables we find that racks are never used, all the hay being cut up and mixed with straw. Of such a mixture, one-fourth to one-eighth being straw, 18 lbs. are given to each horse per day, with 14 lbs. of bruised oats, and 1 lb. of bruised beans. This is sufficient for a horse *constantly* worked.

We have notes of other modes of saving hay and expense, which we reserve to a future occasion, or until we hear from some of our brethern on this subject.

A CONSTANT READER.

Crops, Prices, &c., in Iowa.

EDS. CO. GENT.—To day it rains, as it has rained, or snowed or blowed, bitter and cold, about twice a week for the last two months. The season past, taken altogether, has been the most unpropitious one I have ever experienced during four years residence in Iowa.

What with sudden and severe extremes of wet and drouth, early frosts, and other untimely circumstances, no crop has been an average one, while some have been almost total failures. Owing to early drouth and defective seed a very "poor stand" of corn was got, and the early frosts of fall completely ruined all the replanted, so that in many instances on the upland prairies it was a total failure, and every where light. I think the crop must have been light generally—the deficiency in the hog crop being pretty good evidence.

Hogs are generally light, and as the packing season advances prices improve. Oats were very light, and hay also—potatoes very scarce—wheat light.

You can judge something of the state of things here by the prices in town. Corn is selling by the load at 55c. a bushel—oats 40c. or more—potatoes $1.50, cabbage 25c. a head, and imported from St. Louis. Onions $1.50, and none to be had at that. Cranberries 20c. a quart—dried apples and peaches 10c. a pound. Green apples, inferior, $3.50 a bbl. Milk 10 cents a quart—butter, good, 35c. a pound, inferior 25c. Cheese 15 to 20c. Hay, $25 for timothy, and 10 to 12 for prairie, per ton. Wood $5 to $8 a cord, and coal about 40c. a bushel.

From this you can guess what the creature comforts

of the good people here amount to. The benevolent soul may ask what will become of the poor. Echo and the "well to do" may answer what?

It may seem strange to eastern people that such prices should prevail in the heart of the richest body of land in the world, but it is nevertheless true. Good living is harder to be got, and costs more at the west than in the east. And this state of things must last for a long time, for there is such a constant stream of emigration, and so large a proportion of our population is changing, or ready for a change when a good time comes, that but few will undertake any thing involving many years time and much labor. We have a city of 12,000 inhabitants and rapidly growing, yet there is not a single market gardener of any consequence, and not a fruit establishment of any kind. We have two small nurseries, but no fruit orchards of any consequence. It seems to me that a better opening for a regular fruit business does not exist. The growth of our western cities is far ahead of the improvements about them. HAWK-EYE. *Keokuk, Iowa, Dec.* 29, 1856.

Repulsion of Mice from Potato Fields.

MESSRS. EDITORS—I have shared with the community in the troubles occasioned by mice the past year. Last spring I rented a plot of ground of a neighbor for the culture of potatoes. It was the central portion of an old meadow, where the mice had destroyed much grass the preceding winter. It was inverted by the plow in the early part of May, and planted immediately. I soon found a few of my potatoes failing to come up. On examination I found the tubers destroyed by mice. Others came up and grew very slowly, and with a slender growth. Here too, I found the tubers eaten off below the sprout, thus depriving it of the support of the tubers while as yet it was imperfectly rooted. Early in August I also found the mice and rats too, attacking the young potatoes in the hill.

My ground having been plowed too shallow early in the spring, when I was absent, I judged it best not to disturb the sod in the culture of my crop, especially as the hills were all put in much below the sod, with the aid of a grub hoe. Thus the rats and mice had the better chance to work out channels between the furrows.

The field contained a little more than one acre, and was occupied as an experimental one, in the culture of new seedlings, of which I had some two hundred and seventy varieties, originated in 1849, 50, '52 and '53, besides numerous imported and common sorts.

It seemed very necessary, therefore, to do something to save my crop. The following plan was both cheap and effectual, since I did not lose more than one bushel of potatoes from the ravages of these vermin in the whole field.

I made a mixture, arsenic and horse-feed, (corn and oats ground together,) using in the proportion of one ounce of the former to two quarts of the latter. I mixed them in a pail, working them thoroughly together in a dry state. Then I added a little water to make the arsenic stick, and to prevent the whole from being blown away by the wind.

Taking the pail on my arm, I went through the whole field row by row, searching out every hole, into which, when found, I put, with an old iron spoon, a spoonful of this mixture. Soon I found an occasional dead mouse, and also noticed that the holes grew old as though no longer used. The first application was made August 11th. The application was repeated August 22d because I found fresh holes, made probably by a new colony of intruders from the surrounding meadows, and a field of spring wheat a few rods off, which they greatly hurt when just ripening. Sept. 18th I made a third application. First and last I used about eight ounces of arsenic, costing about fifty cents, and one-half bushel of horse feed, worth as much more.

This field being far removed from human habitations, no domestic animal was exposed by this free use of arsenic. On digging the crop, such heaps of poisoned meal as remained, were carefully scattered or covered up, previously to the admission of cattle into the surrounding field of pasture. C. E. GOODRICH. *Utica, Dec.* 9, 1856.

Profits of Root Crops.

MESSRS. EDS.—Having raised some root crops, I will give you the results and also the manner of cultivation. I got the ground ready June 1st, by plowing twice, and putting on 20 loads short manure to the acre, and five barrels hen manure—used one of Emery's seed drills in sowing. After harvesting the results are as follows:

One-eighth of an acre mangel wurtzels, 125 bushels,		$31.25
Expense 2 days team,	3.00	
1 lb. seed,	1.00	
5 loads manure, 1.00,	5.00	
1 barrel hen manure,	1.00	
2 days hoeing and weeding, 75c.,	1.50	
2 days harvesting and dressing, 75c.,	1.50	
		$13.00
		$18.25
One-eighth of an acre purple-top turnips,—111 bushels at 25c. per bushel,		$27.75
Labor and seed as above, less 2 days, 75c. per day,		11.50
Balance,		$16.25
Half acre carrots,—410 bushels at 31c.,		$127.10
Expenses and labor,		33.00
		$94.10

Deducting expenses it gives me a balance of $128.60, which is a fair profit on three-fourths of an acre.

Last June I sowed half a pound of yellow Aberdeen turnip seed. It came up as well as the purple-top, looked well for some time, but in August they began to get yellow on the tops and died off, and when I harvested them I did not get two bushels good turnips on the whole.

Can you or any of your subscribers tell me wherein I failed, and how to apply the remedy? The ground was prepared the same as the other roots. J. WALLACE. *Victory, N Y.*

To Cure Dried Beef and Hams—Sausages.

MESSRS. EDITORS—Last year, after using up our dried beef we bought some, and found it so much inferior that we desired that all might know how to make good dried beef or hams. For this purpose I send you our

RECEIPT FOR BEEF OR HAMS.

To 36 lbs. meat—1 pound salt—1½ table-spoonfuls saltpetre—one-third rubbed on once a day for three or four days, and they are ready for drying or smoking.

RECEIPT FOR SAUSAGES.

To 36 lbs. meat—9 or 12 ozs. salt—1½ ozs pepper—1½ table-spoonful saltpetre—3 table-spoonfuls molasses—6 handfuls or more of sage.

I send you the above, hoping some one may get a slice of bacon without soaking out all the juice of the meat before it is cooked. E. S. MALTBY. *Bristol, Conn.*

Cure for Foot Evil.

Sure cure for such "foot-evil" as cattle in this vicinity are troubled with:

Fill the diseased part with fine salt—then pour on a small quantity of spirits of turpentine. From one to three applications will usually effect a cure. N. C. DAY. *North Leominster, Mass.*

"Farming on the Prairies."

With all due respect to "S. W. SUTHERLAND, near Bloomington," Ill., we must be permitted to enter our protest to the inferences drawn from the article he writes under the above caption, in the Co. Gent. of 25th Dec. last. Such statements, however possible or true, in occasional instances, are certainly very wide of the mark, *as a rule*. New-York we have supposed to be considerable of a State—agriculturally, as well as commercial and manufacturing—particularly central and western New-York. No part of the United States can show an agricultural district of equal extent, where so much wealth has been accumulated in so short a time since its settlement, nor so dense a population to the square mile as in the central tier of counties west of Utica, nor a country where the soil holds its fertility better, and supplies the farms within it more substantially with fuel, fencing, and water, as well as variety in products for family consumption. Yet there is not one among our New-York farms, with all its wealth of improvements and conveniences, which can come up to our correspondent's specimen of production on a *new prairie* "farm of 640 acres, with $10,000 capital."

Let us look at this subject carefully, and in detail. From what we know of the wild prairie lands about Bloomington and elsewhere in Illinois, they may be bought at $5 to $20 an acre, with no wood, or running water, or springs, upon them. Whether these lands are worth that in reality, may be a matter of opinion; but as in these wild-excitement "western" times they do sell for that, on part cash and part credit terms, we will let it go as their value—say an average of $10 per acre. Thus, for $6,400 you have a naked farm of 640 acres. Suppose you pay $1000 down, you owe, of course, $5,400, on which you have got to pay principal and interest, in time, or lose the whole. Now, to live on this farm comfortably, and secure your crops, as Mr. Sutherland proposes to enclose it all, there must be a house worth at least $1000, and out-buildings, such as stables, &c., worth $500 more. Then it must be fenced. As all the fencing is to be bought, a dollar a rod is the very cheapest it can be built for. Thus, a fence all round it will be four miles, or 1280 rods long —$1280. But, there must be some small fields, yards, &c., to make it possible to occupy it with any sort of economy or convenience. Another mile of fence must be added, costing $320. To this add gates, &c., &c — $400 in all will be required, making $1,680 for that item. After all this is done, both fuel and water is out of sight, only when it rains, or a car load of lumber passes by, or within the distance of a railroad. How much these items will cost, is not told us, but one to five hundred dollars may be expended in sinking a good well, and the family fuel for one year, 50 cords, or its equivalent in coal, will cost at least $250. There are about $1,000 in teams, another thousand in implements, tools, &c., together with a few cows and pigs for household use, no marketable or feeding stock being included. Here then is the outlay either in cash expended or its equivalent, viz:

640 acres land at $10 per acre,	$6,400
Buildings on the same,	1,500
Fencing do	1,680
Water, say,	250
Wood lot or its equivalent in annual cash to buy wood, say,	3,000
Teams, implements, family stock, &c.,	2,000
All fixed capital,	$14,830

Here, then, is the snug little sum of near $15,000 expended in dead capital before you produce a dollar from the farm. Now it is asserted that $9,600 can be realized from the first crop of wheat—that is, provided every acre is sowed, producing 15 bushels to the acre, and it brings a dollar a bushel. Let us ask, what are the family to subsist on while this wheat is growing? Where is the garden, the corn-patch, the potato-field, pasturage for cows, grass for winter forage, &c., &c.? Why, this is to be got off of other people's land adjoining you, who don't cultivate it! But suppose the adjoining owners are as shrewd as yourself, and do occupy and cultivate their lands—what then? But we will not cypher any further on this item. "When once a-going," an Illinois farm is to produce this:

100 head of Beef Cattle at $36,	$3,600
150 fat Hogs at $10,	1,500
5,000 bushels Wheat at $1,	5,000
1,000 " Barley at $1,	1,000
	$11,100

All with "the labor of 6 men, *except* in harvesting, and threshing-time," &c., &c. All this looks well, if there were to be no debtor side to the account. Let us see how this is: All this labor of raising the grain, feeding the stock, &c., cannot be done with less than the labor of eight men *the year round*, instead of six, with extra work as related. This labor is worth

$200, at least, per man, say	$1,600
The cattle have got either to be bought for feeding, or raised on the farm, which is the same thing, at full $25 a head, which is	2,500
So with the hogs at $6 a head,	900
We will take off 40 cents a bushel off the wheat and barley, as 60 cts. is all its average value at Bloomington,	2,400
Interest on $15,000 capital invested in farm at 10 per cent,	1,500
	$8,900

From $11,100 turned off the farm deduct $8,900, and you have left the sum of $2,200 as the nett product of this 640 acre farm! throwing in the support of the family, extras, &c., &c. We may not have got all our estimates mathematically correct, but they are a sufficient approximation to correctness for the purpose. We may add, too, that 50 bushels of corn to the acre is a full average crop for any farm in Illinois, old or new, and so is fifteen of wheat—the whole average is not exceeding twelve, and part of that *spring* wheat, worth 15 to 20 cents a bushel less than winter wheat. Then, as to the little family comforts, luxuries, schools, society, churches, roads, &c., &c., where are they? But as these are matters of taste, simply, with many people, we will throw them out, and put the question on the money results alone. Let our readers judge how superior Illinois farming is to that of New-York, with our lands at double price to theirs, and prices of grain in about the same proportion, and meats fifty per cent. additional to theirs, and all the enumerations at what the parties choose to estimate them.

The *truth* is what we want to get at, and our object in thus showing up both sides of the story is that our readers may judge dispassionately, and without the plausibilities of a *rose-colored* story to warp their cooler judgment. The prairie country of the west is a broad, beautiful, fertile land, inexhaustible, almost, in soil, greatly wanting in many of the necessities of every day life, yet rapidly opening, by the construction of railways, to population, wealth, and solid improvement. We glory in its progress. It is the country for the farmer of limited means, and a growing family; for young mechanics, and other classes of earnest, hardy, industrious adventurers. But at present prices for wild lands there, with capital in hand, we say that farms with all the necessary improvements on them, can be as well or better bought in New-York, as west of it—or in Ohio, or Michigan, as cheap as in Illinois. Speculation, and the last two or three year's prices of farm products have had too much to do with the selling price of prairie lands for the farmer who wants to found a permanent home for occupation. Long credits on land purchases, with ephemeral high prices for farm products, have lured many an adventurer with limited capital into investments and obligations far beyond his ability, we fear,

to execute. Yet we hope for the best, and wishing all possible prosperity to our prairie friends, and a safe deliverance from many of their prospective obligations, we would advise the snug farmer already planted on his comfortable acres in New-York, and its adjoining States, to look well before he parts with a *certainty*, to leap into an *uncertainty* for a future home. In 1835 and 1836, millions of acres of wild lands were monopolized by speculators in the anticipation that no land would be left beyond them for the settler. Now, States and territories far *beyond* these are opened for settlement, with ten times the area of land, and the insatiate maw of land absorption is as eager as ever to clutch it. We hope not with like consequences, yet we fear and tremble lest in too many cases it may be so. A.

A Good Method of Storing Potatoes and other Roots.

One of our "constant readers" informs us that he is so *well convinced* of the *beneficial* consequences of a method of storing turnips, potatoes, parsnips, and other roots in the cellar, which he was led to adopt some years ago from a hint or recommendation in the *Cultivator*, that he is desirous of again calling attention to it, that others may be induced to try it, and may be benefitted by it as he has been. He states that he keeps several loads of sand or sandy loam in his cellar, and when he puts any potatoes or other roots in his cellar he packs them in boxes or barrels, and sprinkles in a layer of sand upon every layer of 6, 8, or 10 inches of the roots. He is not particularly careful to fill up *all* the interstices between the individual roots, nor to bury or cover completely each layer, but he is careful to make a complete covering at the top of each barrel or box, to exclude as much as possible all light and air.

Previously to adopting this practice his potatoes would lose flavor and quality during the winter, and his turnips would become pithy and wilted. Other roots would also become deteriorated in quality and flavor. Ever since he has adopted this plan he has found all his roots in much better condition during winter and spring. They remain fresh as when first put into the cellar; and as the sand has never yet become dirty, he uses the same year after year.

Since adopting this method of storing roots of all kinds in his cellar, our informant has found that two results follow from it, which it may be of some utility to some of our readers to mention. The first of these *incidental* results—apart from the *main* result, which is the preservation of the roots in a superior condition as to freshness and flavor, or good quality,—is that potatoes and other things thus stored are not nearly so easily chilled or frozen in very severe cold weather. This fact may be of use to those who, like our informant, have cellars which no amount of banking can make proof against the inroads of very severe cold.

The second of these *incidental* results is that potatoes and roots thus stored begin to sprout in the spring a little earlier than they would otherwise do. This should be remembered and provision of some kind made to prevent it.

When there is a want of leisure or other convenience to store potatoes, &c in boxes, barrels, or small bins, this method may still be adopted in a modified form. The articles to be preserved may be put into a pile on the cellar floor, and sand, sandy loam, or some other "*clean dirt*," if any such Hibernian article can be found, may be sifted or shoveled over them, so as to exclude air and light.

Poultry Book.—In our recent notice of Mr. Bement's new work on Poultry, we neglected to state as we should have done, that an edition has been published with *colored plates*—price $2.50.

Management of Bees in Houses.

Messrs. Editors—For the benefit of Jared Case of Troy, Pa, and others, I will give my experience in the building of Bee Houses. I built a house or room about eight years ago in the attic of my dwelling-house. The room is six feet square, and six feet high, lathed and plastered; it being under the roof, I made a spout about six feet long, to take them outside of the house. I made the spout six inches square, where it entered the bee house, and tapered it down to one inch by six, where it came out side of the house. My reason for doing this was, to give the bees a chance to pass without being crowded. I filled up one half of the room opposite the door, with slats about twenty inches above the floor, leaving about six inches space between each slat, and ten inches between each tier of slats. On the topmost tier, I placed two good hives about two feet apart, and when the weather got sufficiently warm for them to commence work, they did little else than fight, until there was as many killed as had originally belonged to one hive, and what few were left went into the other hive, and have since worked well, having filled up the space between the wall and the hive, and above and below. I cut off the side of the old hive, and have taken out all of the old comb. I always take out the old and blackened comb, and let my bees have the best to live on. They are getting very strong, and do not swarm. The advantage I claim for this situation, is that they are secured from the sudden changes of the weather, and when elevated above the ground the millers have but a poor chance. They need ventilators; I punched holes through tin and nailed it to the lath before it was plastered.

To those who have a large number of hives, and wish to raise honey without having the bees swarm, I recommend the following plan: Place your hives under shelter in a dry situation, in the upper rooms of an out-house or dwelling—arrange your hives on a bench above the floor—on the top of each hive bore two or more large holes, and put a temporary cover over these holes that can be easily removed. When the hive is sufficiently filled, take the cover off the holes on the top of the hive, and place a hive about a size larger on the top of the hive and over the holes and let the bees work up, and when the topmost hive is sufficiently full remove the lower hive and put the upper one in its place, and so keep changing the hives alternately, always increasing each hive in proportion to the increase of the bees. The under hive should be removed late in the fall or early in the spring, while the weather is sufficiently cold to make them torpid. When exposed to the air, you can easily remove them from the comb in the old hive and drop them in the holes in the top of the other hive, where the heat of the bees will soon bring them to life.

The best shape of a hive to keep bees from swarming is, to make them nearly square. They will swarm in a long narrow hive of the same dimensions sooner than in a square one. Place the benches as near the wall as convenient, so that the bees will not waste too much of their precious time in traveling. S. G. Clark.
Jamestown, Mercer Co., Pa.

Good Crops.—The Lewis Co. Ag. Society, at its late meeting awarded premiums on field crops as follows:

Lewis Stephens, Lowville, for ten acres wheat, yielding 200 bushels.

Norman Goudy, Lowville, 2¼ acres barley—produce 98 bushels.

A. H. Lee, Turin, for one acre Indian corn—yield 80 bushels, and to Abel Foster, Turin, for 71¼ bushels.

Corn meal should never be ground very fine, as it injures the richness of it.

Practical Farming—Good Crops.

MESSRS. EDITORS—I have been for a number of years interested in agricultural pursuits, and during that time have devoted a part of my winter evenings to agricultural reading. Most of the books and essays begin with telling us a long story about what Lord A, B, or C, has done in England—or how the Belgians, Germans, Swiss, French, Italians or Chinese, conduct their farming—in short they have ransacked the whole world for material, and overlooked what to us is the most important—*Home*. What, to us, is the manner of cultivation among other nations? Our soil, and more especially our climate, are entirely different. What would ensure success in one place would only ensure failure in another, with a differing soil and climate—even in our own country. How much good in a *practical sense*, would an essay on the sugar cane or rice growing, do to a Berkshire farmer? It would only add to his fund of information. I contend that all countries and all places, have a peculiar method by which the most productive powers may be developed. What would be good farming in Massachusetts, might not prove so in the same latitude in the western states; and to go nearer home, what would be profitable to raise on a dry gravelly or sandy soil, would not do on a wet or clayey one. It is true many crops adapt themselves to the soil to which they may be applied, and give a fair remunetion for the manure and labor devoted to them; but still if they had been planted on soils more congenial, how much greater would have been the increase.

Almost every farmer has a variety of soils to cultivate, from the dry gravel knolls to the unreclaimed peat bog. What to him would be of real utility, is to know the crops which are best adapted to each variety of situation, and how in the cheapest manner his land may be improved; and the best way to come at it is, I think, for the farmers to be more willing to communicate through the various Agricultural Societies and Journals, the results of their experience. How many of the tens of thousands who visit our cattle shows, ever think of putting on paper the result of their own particular farming, and handing that report to the secretary of the society. Here and there you see an account of a great crop of a certain variety of vegetable produce, and the essays, one half are written by men who never held a plough or swung a scythe.

Come forward, gentlemen, and tell your own stories. You, all of you, possess a fund of knowledge which is to you the secret of success. Let us have it, and in giving it to others you may receive a return that will be of incalculable value to you.

You need not say you dont understand writing well enough. If your own hands are too used to the hoe or plow to write easily, you have daughters, sons or friends, who would be willing to write as you dictate to them.

Now I don't mean to preach what I don't practice. My lands are from a coarse gravel to a peat meadow; and to begin, I cart clay to my gravel land, and gravel to my peat land, and I think it is of great benefit, and the work is done in winter.

I plow my clay lands in the fall and lay the furrow slice at an angle, and let the frost work at it.

Gravel lands are plowed in the spring, and the compost (for I use it for every thing,) spread and plowed in, deepening the plowing each year.

My meadow land is drained so that the water is low enough to prevent the growth of the old water grasses—put *a pin in there*—(you would seldom hear of a reclaimed meadow going back to bull heads and water grasses, if they drained it lower)—in the first place.

My compost for dry lands, is meadow mud, leached ashes, and cattle manure—for clay lands, long manure and peat—for low land, night soil, loam, horse manure and sand.

I can get 400 to 500 bushels onions per acre. Manure, 7 cords compost of leached ashes, cattle manure, muck, and 20 bushels bone dust, plowed in in the spring. Sow as early as possible. Of carrots 20 tons per acre—manure the same. Cabbage, 30 tons, or 4000 heads of about 15 pounds each—manure, with the addition of a little night soil, is the same as for onions. Corn, I get 50 bushels per acre—same manure, harrowed and plowed under.

My leached ashes I purchase, and the bone dust comes from Boston, and these two have done more than any other manure on my light lands.

Potatoes I plant on the low lands, and when they don't rot, get about 175 bushels per acre.

Come, brother farmers, here is a rough outline; perhaps I may sometime go more into particulars. If any thing is of use to you in it, I am very glad, and in return give us all the methods of your own management. R. *Danvers, Mass.*

We thank our correspondent for the above, and hope he will favor our readers with further and more particular details of the modes by which he produces such crops. While there is perhaps some justice in his remarks on agricultural reading, we are a little afraid he forgets that *the great principles that must underlie all good farming are the same wherever it is practiced.* Drainage, rotation of crops, manures and a clean and well tilled soil are alike essential to it in Europe and America—as a general rule,—the exceptions being confined to new lands and rich river bottoms as yet undeprived of their original and almost exhaustless wealth of plant food. Hence a knowledge of the practice of good farmers among the "Belgians, Germans or French," is as likely to give a Yankee the clue to successful practice at home, if understandingly used, as if the transactions of which it consists had taken place in his own immediate neighborhood. We have learned much of our best farming from the systems practiced in Great Britain, and are constantly learning more. To carry off the surplus moisture of the soil, and keep it so that the roots of plants shall easily penetrate it, and the moisture of the atmosphere be absorbed by it in seasons of drought; to economize and most economically apply the manures of the farm; to select the best soils for particular crops and to cultivate them in the most profitable way, are all subjects on which we can yet profitably consult transatlantic experience.

But it is necessary that the farmer should exercise a power of generalization, if we may call it so, by which he can *separate the details, from the theory*, of practice elsewhere, whether in another county, another state or another continent. He must think and judge for himself as to how far the experience of another man will *suit* his own soil and climate. There is one thing certain that we shall never have a Compendium of farming for every farm in the country—and so long as this is true, so long will it be essential to success to *think out*, every man for himself, at least to some extent, the *way in which he shall individually apply* the great rules we have shown to be fundamental in all enlightened agriculture.

Meantime, to elucidate these principles and bring them to the knowledge of all farmers; to induce them by degrees to improve their present modes of practice, and to place before them in the strongest light the advantages of doing so,—these are just the reasons why, with our correspondent, we invite them all to "tell their own stories" in our paper, and for these reasons also that we ask their aid in circulating it, and in drawing from others their ideas and modes.

BACK VOLS. OF THE CULTIVATOR.—The volume of THE CULTIVATOR for 1856, we have now ready, stitched in paper covers, 75 cents and bound in muslin, $1.00.

Agricultural Societies.

U. S. Ag. Society.—The annual meeting was opened at 10 o'clock on the morning of Jan. 14th, Prest. Wilder in the chair. The attendance was larger than usual. The President read his annual address, containing many practical suggestions, and showing the Society to be in a flourishing condition. The election of officers took place on the 15th, when Col. Wilder was re-elected President. The list of Vice-Presidents has not come to hand.

The following is the Executive Committee: Governor King of New-York, Gibson Mallory of Kentucky, Dr. Elwyn of Pennsylvania, D. J. Browne of the District of Columbia, Frederick Smith of New Hampshire, Dr. Stevenson of Indiana; Secretary, B. P. Poore of Massachusetts; Treasurer, B. B. French. Secretary Guthrie presented an invitation for the Society to hold its next exhibition at Louisville, Ky., which was accepted. A resolution in favor of purchasing Mount Vernon for an Agricultural University was discussed and adopted. The merits of the Chinese sugar cane were discussed.

Resolutions were adopted approving of the recommendation of the Commissioner of Patents in relation to obtaining accurate statistics of the staple productions of the United States, and recommending the Governors of States and Territories to adopt the plan proposed.

Conn. State Ag. Society.—The annual meeting which was held at Hartford, Jan. 7th, was one of unusual interest, growing out of the discussions on the report of the Executive Committee, who made several important suggestions in relation to the management of the Society—the question of a permanent location, of the employment of a chemist, of the establishment of an agricultural museum and library of American and foreign agricultural books, reports, transactions, etc., and the recommendation of standard weights for measures of grain and root crops. The recommendation for the appointment of a chemist, we rejoice to see, was adopted, and Prof. S. W. Johnson of Yale College, nominated for the place. We consider this an important step—one from which we anticipate the best results.

The treasurer reported the receipts for the past year at $15.129.28—the payments $15.796.40—surplus in the treasury $4,285.48.

Officers chosen for this year:—

President—Nathaniel B. Smith of Woodbury.
Vice-Presidents—Chas. H. Pond of Milford; Norman Porter of Berlin.
Directors—Hartford Co.—Dr. H. A. Grant, Enfield; New Haven Co.—B. H. Andrews, Waterbury; New London Co.—Dr. D. F. Gulliver, Norwich; Fairfield Co.—E. A. Hough, Bridgeport; Windham Co.—W. H. Putnam, Brooklyn; Litchfield Co.—T. L. Hart, West Cornwall; Middlesex Co.—Fred'k Hall, Middletown; Tolland Co.—R. B. Chamberlain, Coventry.
Cor. Secretary—Henry A. Dyer of Brooklyn.
Rec. Secretary—T. S. Gold, West Cornwall.
Treasurer—F. A. Brown, Hartford.

Ohio State Board of Agriculture.—This Board consists of ten members, who hold their places for two years, five of whom are elected each year, by a convention of delegates from the several County Agricultural Societies in the State. At a recent meeting of this body, two members of the old Board were re-elected, and three new ones, to fill the places of Messrs. Ladd, Worthington and Steele, who declined a re-election. The members of the Board for this year are as follows:

Alexander Waddle, South Charleston.
Lucian Buttles, Columbus.
R. W. Musgrave, Sulphur Springs.
B. Stedman, Cleveland.
Abel Krum, Cherry Valley.
G. W. Banker, Marietta.
John K. Green, Carthage.
John M. Milliken, Butler county.
T. S. Webb, Stark county.
Luther Smith, Logan county.

This Board has been organised by the election of Mr. Waddle as President; Mr. Milliken, Rec. Secretary; Mr. Buttles, Treasurer, and John H. Klippart, Cor. Sec'y, in place of Dr. Sprague who is about to remove to Iowa. Mr. Klippart has been connected with the Ohio Farmer for two years past, and will make an efficient and valuable officer.

Vermont State Ag. Society.—The annual meeting of this Society was held at Middlebury on the 8th of Jan., when it was reorganized and a new constitution adopted in accordance with an act of incorporation passed by the State Legislature at its late session. The following officers were elected:—

President—Frederick Holbrook, Bratleboro'.
Vice-Presidents—Edwin Hammond, Middlebury; J. W. Colburne, Springfield; Henry S. Morse, Shelburn; Henry Keyes, Newbury.
Directors—E. B. Chase, Lyndon; H. H. Baxter, Rutland; Jacob Scott, Montpelier; Jona. R. Potter, St. Albans; Nathan Cushing, Woodstock; David Hill, Bridport; John Gregory, Northfield; John Jackson, Brandon, and J. W. Vail, Bennington.
Cor. Secretary—D. C. Linsley, Middlebury.
Rec. Secretary—Charles Cummings, Brattleboro'.
Treasurer—Edward Seymour, Vergennes.

The Annual Meeting of the Albany Co. Agricultural Society was held at the City Hall on Monday, the 5th inst. The Treasurer reported cash in hand, $324.32, and the following list of officers were elected for 1857:

President—Capt. Jos. Hilton, New-Scotland
Vice-President—C. W. Goddard, Albany.
Secretary—A. F. Chatfield, Albany.
Treasurer—Luther Tucker, Albany.
Directors—J. McD. McIntyre and Henry Russell.

The meeting passed off with unusual good feeling, and it is hoped that the friends of the society will unite their efforts to place it at the head of similar organizations in this and other States. Before adjourning, the customary vote of thanks was passed to the retiring officers, and it was unanimously voted to amend the constitution, so that the annual meeting shall hereafter take place on the *second Wednesday*, instead of the first Monday, of January.

Madison Co. Ag. Society.—Annual meeting at Morrisville on the 6th of Jan., when the following officers were elected:

President—John R. Chapman of Sullivan.
Vice Presidents—J. C. Tillotson of Cazenovia; Gardner Morse of Eaton; John Potter of Stockbridge; Stephen Hill of Fenner; Jonathan Wells of Nelson; David Maine of De Ruyter; Truman Baker of Lebanon; Oliver B. Hinckley of Brookfield.
Secretary—Hiram D. Cloyes of Eaton.
Treasurer—Lorenzo D. Dana of Eaton.
Directors—Butler Gilbert of Hamilton; Wm. P. Wells of Cazenovia.

Premiums were awarded on spring wheat to R. S. Ransom, for 69 bushels on 2 6-10 acres—on corn to Ed. Richardson, 81 bushels 24 lbs. per acre—on potatoes to A. L. Brown for 171 bushels on half an acre, and to W. P. Wells for 173 bushels on half an acre. A discretionary premium was awarded to R. S. Ransom of Fenner, for a very fine specimen of *Osier Willow* raised by him in the town of Fenner, and manufactured into baskets.

Lewis Co. Ag. Society.—The annual meeting was held at Houseville, Dec. 23, when the following officers were elected for 1857:

President—Edmund Baldwin.
Vice Presidents—Joseph House, J. A. Willard, Jas. H. Miller, Geo. Woolworth, Eli Hough, Abner A. Johnson.
Cor. Sec'y—Cornelius E. Stephens.
Rec. Sec'y—Mortimer Smith.
Treasurer—M. M. Smith.
Executive Com.—C. C. Riggs, L. S. Standring, Albert Foster, J. C. Collins, Emery Allen.
Committee on Farms—Jas. H. Miller Joseph House, L. S. Standring.

Good Luck.—Col. L. G. Morris' celebrated cow "Duchess 66th," produced on the 31st of last month, two heifer calves, mostly red, of great promise. They were sired by his "Duke of Glo'ster," 13,382.

Inquiries and Answers.

CEMENT FOR UNDERDRAINS.—I wish to underdrain a piece of land on my farm. Allow me to ask you and your readers, their opinion of my "theoretical plan." Tile in the west cost immensely, and stone are not always to be had. I propose to make a drain of water lime after the manner of making water lime pipes to carry water, with this difference that the drain would be of the horse-shoe pattern, and perforated with holes by some sharp pointed tool after it hardens, or at the time of laying it be pierced with pieces of pumpkin, potato, apple, or anything that will quickly decay and leave no "trace behind," except the holes where they "once where." It appears to me to be simple, cheap, and effectual, especially here in the west. CHAS. S. FOSTER. *Leavenworth City, Kansas.* [If the cement tubing can be made cheaply, we see no objection to it. We should prefer making clear perforations at once, as the decayed matter would not soon work out, and would probably stop the passages.]

TILE-MAKING.—Can you or some of your correspondents, give the manner of making tile—what kind of clay (if it requires any particular kind, and the proportions of sand and clay—and in fact, all the information necessary to enable a green one to go into the manufacture; also, the cost of a good tile machine, and where it can be obtained. A SUBSCRIBER. *Chester, N. Y.* [Clay, suitable for the manufacture of brick, will also make good tile; the proportions of sand and clay must be determined by experiment, as what is commonly termed *clay*, contains always a greater or less proportion of sand. Tile machines are manufactured by PRATT & BROTHERS, of Canandaigua, N. Y., who will furnish with the machine all necessary directions for its use; we do not know their price.]

TIME TO SOW TIMOTHY SEED.—What is the result of sowing timothy seed in February or March on new loose land, chopped and burnt over the previous fall? Will the cost of seed and sowing be compensated without previous plowing or harrowing when sown upon the snow? A. J. B. *Lebanon, Ind.* [We have sown timothy seed early in autumn; late in autumn so that it did not fully come up till the next spring; and also early in spring; and in all instances it succeeded well. It was always well harrowed in. No harm can result, we think, from sowing on the snow, if the birds do not get the seed; but we should by all means aim to harrow or brush it into the ground the moment the snow disappears; but it would be better to sow and harrow all at the same time early in spring. If the land is tolerably free from weeds, it will give a good crop of grass the same year, provided plenty of seed is sown—say double or triple the usual quantity.]

BOOKS.—I wish to inquire where I may obtain a book that treats on the diseases of horses, cattle and swine. C. G. *Rose Hill, N. Y.* [Allen's Diseases of Domestic Animals, price 75 cents, and Cole's American Veterinarian, price 50 cents, are both good works. Dadd's American Cattle Doctor and Horse Docter, are larger works, at $1 each. They can all be had of C. M. Saxton & Co., or at this office.]

SOWING APPLE SEED.—Please mention the best time for planting pear and apple seed, in order to get stock for budding and grafting. J. W. W. *Gainesville, Ala.* [Sow as early as possible in spring, as the seed sprout at the very commencement of warm weather. We take it for granted that the seed, in good condition, were mixed with sand in autumn, and properly exposed in winter.]

CHESTNUTS.—Which kind of chestnut is best to cultivate for the *nut*, without regard to shade or ornament, how cultivated, and at what age will it commence bearing? A. B. *Anna, Ill.* [The Spanish Chestnut is much larger than the common, being about the size of a horse-chestnut, and is preferred on this account. It does well in the Middle States, but the nuts do not always ripen well at the north. It wants a *deep* loose soil; and to grow fast when young, the soil must be kept clean and cultivated. We are not able to say what is the average number of years required under good culture to bring it into bearing.]

COAL TAR.—Please to inform me to *what use* coal gas tar is, and can be applied to advantage, and oblige G. D. *Canton, Ill.* [Coal tar is the best of all applications to wood that is exposed to water or water and air alternately. It should be applied warm or hot, and the wood should be as dry as practicable, so as to absorb the tar into its pores. We have applied two good coats to a pine reservoir, exposed to the most rapidly decaying influences of air and water, which would have destroyed it in a year or two, and after a lapse of *eight* years, the wood appeared perfectly sound. Its only objection is its black color, which causes every tool or implement, fence or building to which it is applied, to become very hot in the sun. To those kept in the shade, this objection would not apply. It would doubtless be admirable for boats. Coal tar, mixed with fine gravel, has been used for sloping gravel walks which would otherwise wash badly, and is a complete protection. Mixed with sand, it would form a cement for constructing tanks, ponds, &c., that would be perfectly water tight, and not suffer by freezing.]

THE ORANGE RASPBERRY.—I would like to know whether Brinkle's Orange Raspberry will, with ordinary treatment, produce as certain and as large, and otherwise as good a crop of fruit, as the Red Antwerp. I do not care to be troubled with more than one or two varieties, and I want those the best, and a plenty of them. M. H. *Leesburg, Va.* [Will our friend CHAS. DOWNING, and any other cultivators on the North River or elsewhere, please give us what information they may possess on the above point. We have not yet had sufficient experience to answer the inquiry.]

ADMITTING WOOL DUTY FREE.—What do you think of the proposition to admit wool duty free? Will it not strike a death-blow to the large class engaged in wool-growing, and benefit only the manufacturer? Are the few hundred manufacturers of more consequence than the wool-growers? The Hon. Abbot Lawrence said ten years ago, thut the success of the grower and manufacturer both, depended on the protection afforded by the tariff. We should like to hear from you on the subject. N. H. N. *Otisco, N. Y.* [That the repeal of the duty on wool, will have an injurious effect upon the interests of the wool-grower, appears to us just as certain as that a reduction in the price of wool—the great object of the repeal—will follow. Suppose, for instance, that a farmer raises 500 lbs. of wool—that he gets 50 cents per lb. for it now, and but 40 cents after the duty is abolished. Any one, with a very small knowledge of figures, can easily tell how much the wool-grower would lose on his 500 or 1,000 lbs.]

OSAGE ORANGE.—Will Osage Orange leaves poison cattle or sheep? I wish to know, as I want to hedge in a large spring or drinking place. E. D. [We have never heard of the leaves proving poisonous, and take it for granted that they are not so

EGGS.—Can hen's eggs be transported three or four hundred miles by railway, without destroying their *vitality*, or does a little jolting ruin them for *hatching?* A. B. *Anna, Ill.* [If properly packed, we think they may be thus sent without injury.]

CREOLE FOWLS.—In the American Poulterers's Companion, by C. N. BEMENT, in his description of the Creole fowl, he mentions another breed under the name of Leghorn fowls, and seems to wish to be understood

as if he believed them to be one and the same. By a good deal of inquiry of late, it seems that the public mind is not satisfied on that point. Now I want to know whether they are or are not the same breed. J. M. R. *Butternuts.* [We have referred to Mr. Bement's new book, and can find no mention of the Leghorn fowls. Perhaps some of our correspondents can enlighten J. M. R.]

CHINESE SUGAR CANE SEED.—In answer to several inquiries, we state that this seed can now be obtained of EMERY BROTHERS of this city, procured by them from Georgia, and known to be genuine. They have also samples of the syrup made from it. In New-York it is for sale by Messrs. J. M. THORBURN & Co., 15 John st., and in Chicago by H. L. EMERY & Co.

HOGS.—Last spring I had a sow which I kept in the pen; five or six weeks after having pigs, she got out, and ran about on the ground for a couple of hours; the next morning she was helpless almost, and for two months she appeared to have no use of her hind parts; she would raise up on her fore legs and eat. I could not find out what was the cause of her lameness. I was told by some it was a common thing to sows that had been kept on a plank floor for some time after having pigs, and then allowed to go on the ground. Information is desirable. J. W. L. *Kingwood, N. J.*

CRUSHING SUGAR CANE.—*S. H. C., Norfolk, Ct.* Either of the portable cider mills, which have been figured and described in this paper, would probably answer a very good purpose for grinding and pressing the Chinese sugar cane. Should the anticipations in relation to this cane be in a good degree realized, mills will soon be prepared expressly for grinding it.

BEE HIVES.—Mr. BISHOP has written an article in THE CULTIVATOR, stating his success in the management of the Honey Bee—also saying that he used the Colton hive of his own invention. If he has got a patent for it, I wish he would inform me through the Cultivator where they can be purchased and the price—if not, will he please tell me how they are constructed. G. MC., *Orange Co.*

BRICK MAKING.—A correspondent furnishes the following in answer to an inquiry recently published in this paper:—

Bricks may be made of any earth that is clear of stones, but all will not burn red. In England, bricks are chiefly made of a hazely yellowish colored fatty earth, somewhat reddish, commonly called loam. According to Leibourn, the earth should be dug before winter, and not made into bricks before spring. In general, the earth whereof bricks are made, ought not to be too sandy, which makes them heavy and brittle, nor too fat, which makes them crack in drying. Tempering the earth properly is the all-essential secret. Using too much water makes them brittle; too much sand or ashes, or sandy earth, makes a light brick full of cracks.

Bricks made of good earth, and well tempered, as they become solid and ponderous, so they take a longer time in drying and burning. The well drying of bricks before burning, prevents their cracking and crumbling in burning.

I knew a person who owned a fine bed of clay, and commenced brick making, but his brick came out of the kiln useless. The clay contained too much gravelly limestone. He then made a mill for crushing his clay in a dry state, after which he could manufacture excellent crockery. It is not the richness of the soil, but lack of duly tempering, that causes failure in brick making.

FARM BOOK.—Please inform me what is the best, latest and most complete Farmer's Book, comprising all the Farm work, from dung-hauling to harvesting, also Dairy making, and other labor, together with its price? G. S. D. *Germantown, Pa.* [The best work, embracing all the subjects you refer to, published in this country, is "The Farmer's Encyclopedia," a large octavo vol. which you can get at the bookstores in Philadelphia—price $4.]

MOWING MACHINES.—*S. B. S., New Paltz.* You will find a reply to your inquiry, in some remarks on mowing machines, in answer to another correspondent, on page 45 of this number.

APPLE SEED.—A correspondent at Louisville, Ky., inquires where he can procure apple seed. We presume he can obtain it of J. M. THORBURN & Co., New-York, but those who have it for sale would do well to advertise it in the Co. Gent.

MULTICOLE RYE.—Can you give any information concerning the Multicole Rye—how it has succeeded with those that have tried it—what kind of soil is best for it—and if profitable, where can seed be obtained. W. M. G. *Cannonsville, N. Y.* [Will some of our readers answer this inquiry?]

BOTS IN HORSES.—A friend of mine says that although the bots cannot be killed by spirits of turpentine, oil, &c., they may be "knocked cold" by strong coffee. Can any of your readers corroborate? C. S. F.

PEAS.—Please insert the following questions, for an answer from some of your correspondents: 1. What is the name of the earliest peas, to be grown as green ones in New-York State? 2. Are the black-eyed Marrowfat earlier than the common white Marrowfat—what are the size of the pods, and whether they are as good for culinary purposes as the white Marrowfat? 3. Is there a pea larger than the small early ones, that will follow and come something earlier than the white Marrowfat?

DITCHING PLOW.—I wish to inquire through your paper, about a ditching plow that I have seen noticed in the Cultivator, I think. Is it efficient and durable? How deep and wide a ditch will it cut? Can it be easily worked by an ordinary span of horses? Where can it be had, and what is the price? An answer to these questions will confer a favor. C. M. R. *Rocky Hill, N J.*

CHARCOAL.—Is there any demand for pulverized charcoal as a fertilizer of land? It could be prepared here, and sent to New-York city, or any place along the seaboard, with but trifling cost. Is it in use to any extent, and could sales be made of it? And what is it worth? I would like to hear from you on this subject, or from any parties, by letter or otherwise. L. DEDERICK. *Dranesville, Fairfax Co., Va.*

INDIAN MILLET, &c.—Please to inform me through the Cultivator, where I can obtain the seed of the Indian millet or Dourah corn, and the price, &c. S. H. GLEASON. *New-England Village, Mass.* [We do not know where it can be had.]

REPLY TO J. P.—Your horse is undoubtedly lame from a curb. If you look close on the back side of the leg, just below the hock, near the lower part of the joint, you may find a slight swelling. I have seen horses very lame when the curb was hardly perceptible. A. B. *Bristol, Conn.*

DISEASE IN CALVES—As your columns are open for inquiries of an agricultural interest, I would say that there is a distemper prevalent to some considerable extent in this section of country, among spring calves. They are affected with a cough. It does not seem to affect their appetite much, but they pine away, and quite a number have died. They were brought mostly from Delaware county. Will you or some of your numerous correspondents, say what it is, and the remedy. J. B. H. *New Paltz Landing.*

MILLET.—Can none of your correspondents give the best mode of cutting and curing Millet for fodder, and whether it would do to rake it with a horse rake? J. S.

SHEEP.—Can you tell which is the most profitable breed of sheep to keep here on the Western Reserve, four miles from market—whether Merinos or the coarser wools, such as South Downs, Leicesters or Cotswolds. The wool of Leicesters sold here last spring for 30 cents, and that of Merinos for 45. Sheep weighing one hundred pounds, sold after shearing for from $1.37½ to $1.50. J. S. *Portage Co. O.*

Notes for the Month.

To Our Readers.—Including notes and short communications, we present this month in the neighborhood of *One Hundred Original Articles*, editorial and contributed, comprising a range of subjects and an amount of valuable and interesting reading contained in no monthly of equal or double its price, so far as we know. Is not this number richly worth *Three or Four Cents?*

It is not too late yet to commence the formation of Clubs. We can always supply the back numbers of the volume—the Club can be divided among as many different Post Offices as need be—the Prizes we offer are not awarded until April 10th. Those who compete for these have still the best part of their time before them—we hope they will improve it.

At the cheap price for which the Cultivator is now offered in connection with the Register (ten copies of each for $5) we are inclined to wonder that more of our friends do not take hold of the matter earnestly, and canvass whole neighborhoods until every man has had the opportunity of subscribing. That another Agricultural paper is subscribed for in any household, is no excuse for passing the Cultivator by, as it is too cheap to admit the possibility of any loss from its perusal.

The Specific and other Premiums we offer are intended rather as testimonials of our indebtedness for such efforts than as remuneration for them. In order that the advantages of Clubbing may be felt by *every subscriber*, we give the Register, and receive for it and the Cultivator so small a margin above the actual cost of their production, that it is out of our power in addition to reward our Agents, except to the extent already mentioned. Hence we earnestly ask the assistance of every reader in behalf of those who voluntarily undergo the trouble and expense incident to collecting and forwarding subscriptions—let each subscriber aid the Agent at his Post Office by picking up the names of three or four of his neighbors and handing them over to be forwarded, and he he will confer a benefit upon his own vicinage, and put it in our power still further to increase the attractions of his paper. A very little effort on the part of each—and now is just the time to make it—will thus suffice to produce a very considerable result. We shall be pleased to forward any desired number of copies as Specimens, and to supply a copy of the Register to those who do not already possess it, for use in obtaining subscriptions.

☞ See Terms, Premiums, &c., on another page.

The Register for 1857.—We trust those of our readers who receive the Register as a gift, will not be thereby led to underrate its value. The demand for it this year has been such as to prove most amply that thousands consider it fully worth the retail price of Twenty-five Cents. And the notices with which our cotemporaries have kindly favored it, have been unanimously couched in terms of the highest commendation. We are happy to say that it promises to attain an unprecedented circulation.

Where Clubs for our papers are raised with difficulty on account of the pre-occupation of the field or from any other reason, a dozen or two of the Register might be sold with very little difficulty. Containing *One Hundred and Forty-two* Illustrations, it makes a handsome and attractive book for those least in the habit of consulting Agricultural works. We send twelve copies post-paid for $2—five copies post-paid for $1—one copy post-paid for Twenty-five Cents, or neatly bound in muslin for Fifty Cents. The nos. for 1855 and 1856 are also for sale at the same price.

Perhaps Witty, but not True.—

"Agricultural editors and professors, in the enjoyment of salaries, are almost the only men who think farming profitable."

The above is quoted from an essay published in the Transactions of one of the County Ag. Societies of Massachusetts. It is as discreditable to the taste of the writer, as it is without foundation in fact. The profits to be derived from any industrial pursuit, depend in a great degree upon the energy and good management of those engaged in it. That farming is an exception to the universal rule in all other business—that it can be made remunerative without the care, economy and skill requisite elsewhere, no one pretends. We have yet to learn an instance, moreover, when it has been thus properly carried on for a course of years, in which an ample and generous reward has not been returned for all the labor and expense bestowed. And what but farming has transformed the whole face of this broad land from a wilderness to fruitful fields? What, if not farming, has fed, and clothed, and schooled the masses of our people,—constructed our academies, colleges, churches, and public buildings,—yes, and built up the greatness of our cities, by supplying them with fresh blood, and brains educated by *its* profits and unweakened by *their* cares and dissipations? Agriculture is the immediate sire of Commerce, and the wealth of the merchant finds its first sources in the wealth of the farmer. It is quite time such sneering assertions were discarded. Can the writer of the above,—can any reader of this paragraph—point to a county or town which does not number more or less of those who *have* made farming sufficiently profitable for every legitimate human wish? Farmers should respect themselves, and honor their pursuit; and those who are honestly and earnestly endeavoring to aid them in rendering it still more productive, and its followers still more worthy of its high position, should be recognized as beyond the aim of so weak an attempt at ridicule.

Credit.—The *Canadian Agriculturist* shows its appreciation of the contents of our Illustrated Annual Register for 1857, by filling seven of its pages with extracts from it—one-half of which only are credited. The articles headed "Prevention better than Cure," and "Presence of Mind," were both written for the Register, and are certainly worth crediting. All articles copied from the Register should be credited as requested on the back of the title-page, to "Tucker's Rural Register.

The *Ontario Republican Times* also does us the injustice to copy at length from the Register, the very valuable article on "Doctoring Sick Animals," without any acknowledgment of the source from whence it was derived.

Washing Machine.—A lady in Dutchess county wishes to know where she can get one of "Clement & Willie's Washing Machines," which were described in this paper some time since. She saw one in Columbia county some time since, and would be glad to procure one, if some one will give notice through the Co. Gent. where it can be had.

Frey's Adjustable Wheel Plow.—We published a description of this plow some time since. A correspondent, writing from St. Louis, where we believe the plow is made, says—"The introduction of Frey's new plow, will, in my opinion, constitute an era in the history of that important implement."

Chinese Sugar Cane, its History, Culture, &c.—John P. Jewett & Co., Boston, have issued a handsome 25 cent pamphlet, under this title, by J. F. C. Hyde of Newton, Mass., which we presume will be sent to all applicants who remit its price in postage stamps.

NOTES TO CORRESPONDENTS.—It will be little extra trouble for those who send us subscriptions, to add notes, either in regard to the transactions of State, county, town or club organizations, or with reference to the crops, weather, sales of stock, or any other such matters that may take place in their vicinity,—and we shall always be very glad to receive them.

It will be a convenience to us if any items of this or other sort for publication are written on a separate piece of paper from the business correspondence.

It would save both publishers and subscribers much trouble if the latter were *always* careful to date their letters *with the name of the P. O.* to which their papers are sent, accompanied by that of the State in which it is situated.

For a sum of any considerable amount, please procure a Draft on New-York, *deducting the difference in exchange.* It is well to register letters containing remittances,—to obtain a certificate of their being sent from the P. M., or at least to note down the date on which they are mailed. This last is very important if we ever afterwards have errors or mis carriages to trace out.

Finally, as this is the season of leisure, has the past year seen no result obtained, difficulty solved or experience, which you can communicate to your brother Farmers? "Every little helps." Add your mite!

☞ We regret to see the announcement of the death of HENRY J. CANFIELD, well known for many years as a correspondent of our own and other agricultural papers, and the author of a popular book on sheep. He died of consumption at his residence in Canfield, Mahoning Co., O., on the 27th of Nov. last, aged 69 years.

CATTLE SALES.—We understand that GEORGE BUTTS, Esq., of Manlius, has recently purchased a pair of young Short-Horns of E. MARKS, Esq., of Camillus, as a nucleus for another Short-Horn herd. The animals bought, were the bull calf "Young Symmetry," and the yearling heifer "Olivia."

NEW-YORK AGRICULTURAL COLLEGE.—We understand that at a meeting of the Trustees held at Ovid, Thursday, Dec. 18th, the Executive Committee reported their examination as to the title of the property proposed to be purchased, and the Trustees directed the purchase to be completed on the perfection of the title.

The President was directed to issue an offer to architects for plans and specifications for the buildings—$250 to be paid for the plan approved, and $100 for second best.

The Executive Committee were authorised to make contracts for materials, should it be deemed advantageous to do so during the winter.

The main building will be about 350 by 50 feet, and four stories high—wings to be added when required hereafter.

POTATOES.—I planted 10 potatoes, in 10 hills—variety Western Reds, along side of a patch of round Pinkeyes—all planted the same day and had the same culture, and all dug the same day. Now for the yield: Western Reds yielded one busbel, one peck, good measure, from the 10 hills; weight 74 lbs. Pinkeyes, 10 hills, 28 qts.; weight 47½ lbs.

A WORD ABOUT CORN.—On a small piece, less than half an acre of meadow land, well manured and well tilled, planted three and a half feet each way, worked with cultivator and hoed twice, I picked in two instances a bushel of ears from twenty-eight hills. Variety, eight rowed, a mixture of yellow and white. A SUBSCRIBER. *Hawleyville, Ct.*

FARMING IN DELAWARE COUNTY.—Under this head a correspondent, (G. P., Scotch Mountain,) furnishes us, to show our young men that there is no need to go west for the want of land, with the history of a poor Scotch weaver who came to this country seven or eight years since, and purchased on credit 100 acres of land in the town of Meredith, for between $500 and $600. When he went on to this land, it had not five acres of clearing on it, with no buildings but a small log-house, and not a wall or fence. The farmer, with only a son of 18 years to aid, and without a dollar in money, went to work, and now at the close of seven years he *owns* his farm, and has it well fenced with stone wall and oak and ash rails—they have cleared all the land they desire cleared, and have the place well stocked with a dairy of cows and young cattle—their buildings consist of a comfortable dwelling, a large barn, and cow stable. They have a good yoke of oxen, span of horses, wagons, implements, &c.; and all this made from the soil in seven years. Our correspondent thus concludes—"Now let me say to those who are bent on going west, because there is no chance for them to make anything here—that I know of no reason why by patience and perseverance they may not get along as *well* as this family has; and if they *can*, they might like them be contented."

THE DAIRY.—Franklin county, Vt., is one of the best dairy counties in the United States. It appears from a statement furnished to the St. Albans Messenger, by Mr. P. G. STONE, the freight agent at that place, that there was sent to market from that station alone, during the eight months ending Dec. 1, 1,888,793 lbs. of cheese, and 1,208,614 lbs. of butter—which at the rate of 20 cents per lb for butter and 8½ cents for cheese, amount to the handsome sum of $480,490.79.

THE CULTIVATOR—A CHOKED OX SAVED.—I commenced taking THE CULTIVATOR in 1841. I have 15 volumes bound, and I would not take five times the cost of them, and be deprived of their use. I consider it the best agricultural paper I know of, and I have taken many others. If any of my stock is sick, or anything the matter with them, I go to my Cultivators to see what to do for them. A few years ago I had a valuable ox choked with an apple; he was down, and appeared as though he could not live long. I ran to the Cultivator, and it told me to see if I could feel it in the swallow, and if I could, try to push it up or down. I did, and pushed it down, and the ox got well immediately. P. MITCHELL. *Rockville, Ind.*

IMPORTED SWINE.—Mr. C. S. WAINWRIGHT of Rhinebeck, received by the Baltic, a fine Essex boar pig, selected from a pen of five to which was awarded the first prize at the recent Birmingham show.

Excelsior Railway Horse Powers, Threshers and Separators—Kell's Patent.

THESE justly celebrated machines are being sold in every part of this country, in Australia, Sandwich Islands, &c., and are giving universal satisfaction. They have taken premiums over all other machines of a similar kind at the several State and County fairs where they have been exhibited; and in neighborhoods where they are well known, farmers will not use any other machines. We have large orders for these machines to go south at the opening of navigation, and farmers at a distance wishing these machines would do well to give us their orders early, to be sure of getting them. Orders punctually attended to.

RICH'D H. PEASE,
Jan. 15—w10tm2t 369 & 371 Broadway, Albany, N. Y.

HAY PRESSES.

DEDERICK'S CELEBRATED PARALLEL LEVER Portable and Stationary HAY PRESSES, patented May 16th and June 6th, 1854—which (at about the same cost of transportation as a Railroad Horse Power and Thresher,) are now being forwarded to all parts of the country, and are in every case giving the most decided satisfaction; which (with two men and a horse) are warranted to bale from six to nine tons of hay per day, according to the No. or size of the press—and which are sold for from $100 to $175. For circulars, with full explanatory engravings, and numerous first class references, apply personally or by mail to WILLIAM DEERING & CO.,
Manufacturers, Albany, N. Y.
Dec. 11—weow&mtf

FOR SCHOOL EXHIBITIONS.

THE EXHIBITION SPEAKER & GYMNASTIC Book, containing Plays, Farces, Tragedies, Tableaux, Dialogues and Single Pieces, in Prose and Verse—Senatorial, Humorous, Comic and Miscellaneous. In the Plays, Farces, Tragedies, &c., the action is written out, so that teachers and scholars have no difficulty in performing them on the Rostrum.

Remit 87 cents in stamps, and you will get the book free of postage. Address

D. M. DEWEY, Rochester, N. Y.

☞ Every teacher should have the book at once.

Jan. 15—w1t—m1t.

BERKSHIRE PIGS.

TWO BERKSHIRE BOARS, between six and seven months old—fit for use—fine and very handsome and large.

THREE PAIRS, between three and four months old—very good.

THREE PAIRS, about two months old.

ONE BOAR, from Lewis G. Morris—two years old—very good, handsome and large.

All the above are from a boar of Lewis G. Morris, and from choice sows, and the best lot of pigs I have ever seen, or as good at least, and in very fine condition.

EDWARD WAIT,

Feb. 1—m1t. Montgomery, Orange Co., N. Y.

NEW CHINESE SUGAR CANE.

SEEDS of this much sought for and invaluable plant, in packages of 12½ and 25 cents each—(by mail prepaid 19 and 34 cents,) for sale by WM. THORBURN, Seedsman and Florist, 492 Broadway, Albany, N. Y.

Jan. 22—w4t.m2t.

Bement's Poulterer's Companion.

AMONG all the books heretofore published on the subject of Poultry, none, we venture to say, equals this for variety, embellishments, (having 120 on wood and stone,) and useful information. The volume has been got up in the best style, and no expense spared in the preparation, embellishments, etc., by the publishers to render it THE best and most reliable work of the kind ever published in this country. A fresh supply of this very useful and attractive book, with colored plates, just received and for sale by WM. THORBURN, Seedsman and Florist, 492 Broadway, Albany, N. Y.

Price $2.50. Those remitting the price per mail will have a copy sent with postage paid. Jan. 22—w2tm1t.

TO FARMERS AND GARDENERS.

THE SUBSCRIBERS OFFER FOR SALE 40,000 barrels of their

NEW AND IMPROVED POUDRETTE,

Manufactured from the night-soil of New-York city, in lots to suit purchasers. This article (greatly improved within the last two years) has been in the market for 18 years, and still defies competition, as a manure for Corn and Garden Vegetables, being CHEAPER, MORE POWERFUL THAN ANY OTHER, and at the same time FREE FROM DISAGREEABLE ODOR. Two barrels ($3 worth) will manure an acre of corn in the hill, will save two-thirds in labor, will cause it to come up quicker, to grow faster, ripen earlier, and will bring a larger crop on poor ground than any other fertilizer and is also a preventive of the cut worm; also it does not injure the seed to be put in contact with it.

The L. M. Co. point to their long-standing reputation, and the large capital ($100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

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One barrel,	$2.00
Two barrels,	3.50
Five barrels,	8.00
Six barrels,	9.50

And at the rate of $1.50 per bbl. for any quantity over six barrels.

☞ A pamphlet, containing every information, will be sent (FREE) to any one applying for the same. Our address is THE LODI MANUFACTURING CO.,

Jan. 15—weow8tm4t Office, 60 Cortlandt-st., New-York.

Bone Dust,

WARRANTED PURE. For sale by A. LONGETT,

Jan. 1—m2t 34 Cliff Street, New-York.

FARMS FOR SALE

In the Township o Pokagon, Cass County, Mich.

NO. 1 CONTAINS 160 ACRES, (less by 2 acres sold with a saw-mill)—half prairie and half timbered soil. There is about 130 cleared, and 15 acres more may be cleared at an expense of less than $5 per acre. The soil is of as good quality as any in Michigan, well and conveniently watered—a good two-story frame house, a barn 50 by 30, a hay-barn 50 by 18, and sheds attached—three stables for cows and horses—all mostly new, and another barn mostly finished for hay and cattle, 48 by 16—together with corn cribs, hog pens, and mostly every convenience for carrying on a large grazing farm. There is 8 acres of orchard and garden, containing every variety of fruit suited to the climate, and selected with a view to very early and long keeping varieties, though fall varieties are not wanting. Also a small nursery of several thousand trees. There is about 25 acres of wheat sowed last fall. This farm lies about one-fourth of a mile from the village of Summerville, where there is a new brick schoolhouse, a church, grist and saw mills,—7 miles from the commercial port of Niles, and 7 miles from the thriving village of Dowagiag, and 1 mile from Pokagon Side Track M. C. R. R.

No. 2 lies about 1 mile from the above, and consists of about 229 acres, mostly heavy timbered land, and is in the course of inclosure. This will make an excellent grass farm for summer pasture, and in connection with No. 1 will easily maintain 100 head of cattle, besides horses, sheep and swine, as soon as enclosed. It is well watered with a lake on one end and Dowagiag creek on the other. The timber, when cut and delivered at the Side Track, will three times pay for the land.

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As I am anxious to sell, I will take $10,000 from any person who will buy me entirely out. The half of the purchase money may remain on mortgage on the premises. Truthful information will be given on addressing the subscriber, JOHN M. McALLESTER.

Feb. 1—1t. Summerville, Mich.

E. MARKS,

BREEDER OF

Short-Horn Cattle, Long-Wool Sheep & Suffolk Pigs,

CAMILLUS, ONONDAGA Co., N. Y.

Jan. 1—w&m3m

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PERUVIAN GUANO.—I am now prepared to receive orders for Peruvian Guano, Government Brand, No. 1, direct from the Peruvian Agent, at $54.60 per ton of 2,000 lbs. for all quantities that may be ordered and paid for before the first day of March, purchasers having the privilege of the Guano being shipped during the month of March without expense of storage. When taken in lots of five tons, price $61 for 2,240 lbs. A. LONGETT,

Jan. 15—w4tm1t 34 Cliff-street, New-York.

Columbian Guano,

IMPORTED by the Philadelphia Guano Co. A. LONGETT, Agent.

Jan. 1—m2t 34 Cliff-st., (corner of Fulton,) New-York

Ichaboe Guano.

550 TONS, to arrive by Bark Henry Ellis. For sale in quantities to suit purchasers. A. LONGETT.

Jan. 15—w2tm1t 34 Cliff-street, New-York.

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THE BEST BOOKS IN THE WORLD to teach the American Farmer this, are

Nash's Progressive Farmer,	$ 60
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Allen's American Farm Book,	1.00
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C. M. SAXTON & CO.,
Agricultural Book Publishers,
Jan. 8—weow2tm1t 140 Fulton-st., New-York.

For Sale,

DURHAM YEARLING BULLS AND HEIFERS—also Calves and LEICESTER SHEEP.

RALPH WADE,
Jan. 1, 1857—m6t Cobourg, C. W.

Improved Short-Horns for Sale.

THE Herd of the subscriber being too large for the size of his farm, he wishes to dispose of four very superior cows, all got by imported bulls, and five heifer calves got by imported Bates' bull Lord Ducie (13.181) out of some of his best cows. Also roan bull calf Beaufort got by Lord Ducie (13.181) out of Daisy 7th by Duke, 444 A. H. B., &c., &c. The cows for sale are very superior milkers, as are also the dams of the calves. Direct DR. HERMAN WENDELL,
Oct. 30—w&mtf Albany, N. Y.

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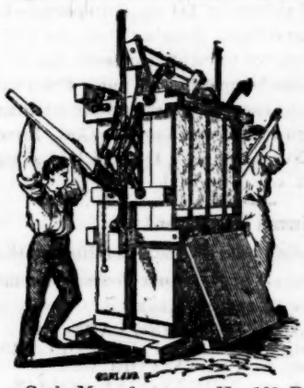
FOR SALE—Thorough Bred Durham Cattle, Pure Bred Spanish Sheep, French Sheep, Suffolk Pigs and Essex Pigs. Apply to J. S. GOE, Tippecanoe, 4½ miles east of Brownsville, Fayette Co., Pa. Jan. 1—w&mly*

Ingersoll's Premium Portable Hay Press.



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It is equally convenient for pressing cotton, hemp, hops, broom corn, rags, husks, &c. Samples may be seen at our warehouse, and circulars with cuts and full descriptions will be furnished upon application by letter or otherwise to

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Dec. 18—w4tm3t

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The Anatomy and Physiology of the Horse.

In one large octavo vol. of 300 pages. Illustrated with 20 superb Anatomical Plates of the Horse, from a great French work.

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GOVERNMENT Brand and Weight. For sale by
A. LONGETT,
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NO. 1 PERUVIAN GUANO,

AT THE lowest market price.
Superphosphate of Lime.
Poudrette, manufactured by the Ludi Manufacturing Co,
Plaster for Land purposes,
Charcoal Dust for Land purposes,
Bone Dust, Sawings, Turnings and Ground Bone,
Can now be obtained in large or small quantities at the

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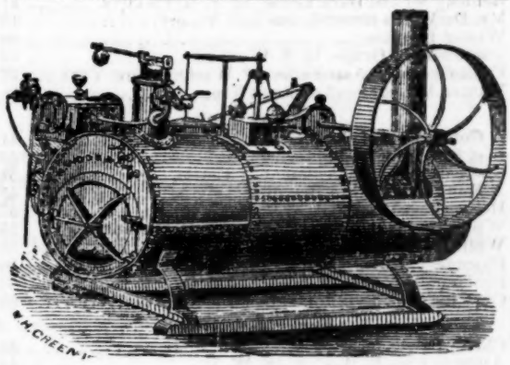
*** REGISTER your letters at the Post Office, and your money will come safe. It will cost you five cents on each letter. Use a whole sheet when you enclose bills, and have the letter well and securely sealed.

ROBERT SEARS, Publisher,
Dec. 18—w1tm1t 181 William-st., New-York.



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Feb 1—m1y Braintree, Mass.

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